

CHOICE

Childcare

Is your child getting the best?

What's new in birth control?

And why can't we get some types of contraception in Australia?

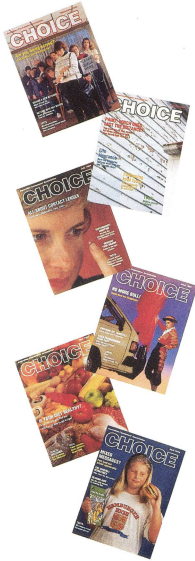
Going green

Choosing where to put your time and money



Tests

Electric lawn trimmers
Solar-powered lamps
Pedestal fans
'Unstainable' carpet



It's your CHOICE ...

... And we mean that literally. Many of the appliances we test and articles we write are at the suggestion of subscribers — solar-powered lamps in this issue is an example. A subscriber wanted to know how well they worked and whether they were worth the money; they're an interesting new product and we tested them to find out.

You don't just give us ideas for tests and major reports, though. Many *Choice Cuts* and pieces for the *Green Page*, *Drivelines* and *Bodywise* are inspired by questions and issues raised in your letters and phone calls. You're an information line to us — and so to other subscribers — about what's going on for consumers at an everyday level all over the country. There are only about 70 of us here and we're based in Sydney — what you tell us gives us a much wider view than we can get on our own.

One thing we're increasingly hearing in recent times is concerns and questions about money matters. The financial world has become very complex and the choices on offer at various stages of people's lives are no longer easy to make. We'll be writing lots of articles and 'testing' lots of money products and services in the coming months to help readers make sense of their money options, and next month we'll be introducing a regular money page, called *Your Money*.

Like our other regular columns, *Your Money* will keep you up to date with developments that could affect consumers, keep a lookout for any dodgy products or practices and, of course, try to answer any queries you may have.

So please keep writing to us, faxing us and calling us — and we'll keep working to give you what you want.



Jane Mackenzie
Editor

Who are we?

CHOICE EXISTS TO HELP YOU MAKE DECISIONS. It might be a question of which washing machine or fridge to buy, or which insurance policy or bank account to choose. It might be a case of giving you enough information about areas such as health, food and nutrition that you feel confident your decisions are based on sound knowledge. The reason you can rely on CHOICE is that the only interests we represent are yours — the consumer's.

We're not a government department or agency, and we get no ongoing funding from any government. Neither do we receive any subsidies from industry, manufacturers, unions or any other group, and we don't take any advertisements in the magazine. CHOICE survives purely because people like you subscribe to it: over 85% of our income is from CHOICE subscriptions, and the rest from sales of our Consumer Bookshelf and CHOICE Books, plus some special technical services such as testing appliances for their energy efficiency labelling. So we're independent in the true sense of the word: beholden to no-one but the consumers we represent and who keep CHOICE alive.

The organisation behind CHOICE is the Australian Consumers' Association. This does more than just publish CHOICE: we represent consumers' interests at federal and state government levels as a balance to the influence of manufacturers and service providers. You can become a voting member of the Consumers' Association as well as a CHOICE subscriber if you wish. The small extra membership fee you pay demonstrates your commitment to the rights of consumers, and gives you a subscription to a second magazine — either *Consuming Interest*, our publication covering broader consumer policy, or *CHOICE Travel*.

Around 70 people work at CHOICE in roles ranging from processing your subscriptions to testing the appliances, answering consumer queries, writing the articles in CHOICE and *Consuming Interest*, and representing consumer interests in the public arena. We're here because you think you need us, you trust us and are prepared to pay to keep us going.

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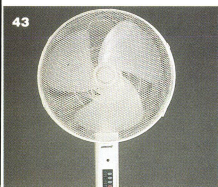


Cover photo: Michael Saggus

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Next issue

Childcare Part 2, food processors, baby monitors, washing machine update, compost bins, products for people with disabilities, dealing with your body corporate.

December, January, February

Tests: Champagne and sparkling wines, home security locks, chipper/shredders, portable stereos, electrical timers, insect repellents, sunscreen fabrics, video recorders, anti-scald products, takeaway sandwiches, car reliability.

Reports: A 'green' credit card, profile of the food market, the CHOICE Annual Christmas Buying Guide, aged care, appliance servicing, gene technology, collectibles.

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The new half lead petrol is a great step forward, but are you putting leaded petrol in your car when you don't need to?

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Choice Reports

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This major CHOICE report investigates the childcare industry in Australia, and parents' satisfaction with it. Part 1 in this issue looks at all the available options, the costs, and the fragmented mish-mash of regulations and guidelines that cover it. Part 2 next month takes up the issue of 'quality care' and how to find it.

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The wider the choice of contraceptives is, the more likely you are to find a method that suits you. What's available in Australia today, what isn't — and why?

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Do you favour direct action, hands-on fieldwork or lobbying your MP when it comes to caring for the environment? We profile nine of the largest environmental groups in Australia to give you a picture of each one's philosophy and priorities and help you choose which might suit you best.

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You can now buy two carpets that come closer to the holy grail of unstainability than any we've seen before.

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We tested several types and gave thumbs up for camping but thumbs down for the garden.

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Sorting out the performers from the pains in the back.

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To look at, a fan is a fan is a fan. But they don't all perform the same, and we found one that blows the rest away in terms of flexibility, safety and features.

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CHOICE CUTS

Transport visions for the future

PUBLIC TRANSPORT CAN WORK

MILES of bumper-to-bumper traffic in peak hours, a yellow-grey smog obscuring the city silhouette, empty inner cities at night — is this where our cities are heading in the 21st century? Most Australians currently use their cars for practically all their trips to work, shopping or social activities — a luxury we can't really afford and wouldn't need if our public transport systems were more efficient and convenient, as they are in Toronto.

The Toronto Transit Commission operates the largest public transport system in Canada. Rapid underground rail lines linking the city east to west and north to south form the spine of the system. Commuters can get a train every three minutes on the underground. Suburban trains, buses and light railways (trams) feed into this system, which is connected — all underground — to walkways, shops, offices and social amenities.

Toronto's integrated public transport system allows people essentially to function without a car.

About 70% of its 2.3 million inhabitants use it daily. Apart from office buildings, the inner-city area features shopping centres, residential developments and even a sporting stadium, right in the centre of the town. There's no need for large parking lots as people from the suburbs can easily reach the facilities by public transport. The system also encourages a lot of people into the inner city in the evenings, which makes it a safe and interesting place, bustling with activity.

We gained these insights from Mike Colle, the Chairman of the Toronto Transit Commission, who recently visited Australian cities on a 'smogbusters' tour, organised by Environment Victoria. So what can Australian transport planners learn from the Toronto experience? According to Mr Colle, the Toronto Metropolitan Government, of which he is an elected representative, has a strong influence on transport issues. "Transportation decisions don't only affect users of public transport but everyone and every

Trams are just part of the public transport system in Toronto, which is used by around 70% of the city's inhabitants every day.



activity in an urban setting," Mr Colle said. "They affect every moment of your life, from the air you breathe to the noises you hear to the way people behave in groups." In Toronto, decisions aren't made by transport engineers but by generalist planners — with more global objectives and in a holistic and humanist fashion.

In metropolitan Toronto, no expressway has been built since the mid 1970s, but the public transport system has been greatly expanded. "Your proposal to embark on a multiple-freeway program seems almost Neanderthal in my view," Mr Colle said at the Sydney seminar. He

also warned that once a freeway built, it'll need to be expanded and improved for years to come, as it invites more usage. "So make sure that commitment in dollars there for 50 years!" he said.

Mr Colle warned about new 'super' technologies. "Go with the tried and proven," he said. "It tends to be much more economic ... and probably more attractive." For example, compared with light and heavy rail lines, elevated rail structures such as Sydney's monorail don't encourage pedestrian and bicycle movement, the sort of thing which makes a street more friendly and less hostile.

Hot-air dryers vs paper towels

A LOT OF HOT AIR

IT SEEMS the war between the hot-air hand dryer and paper towel industries is on again. If you've heard media reports in the past months telling you that "paper towels 'wipe' hot-air blowers for hygiene", did the reports also tell you that the study which produced these results was sponsored by the soft tissue industry?

We recently received a media release from a tissue manufacturer and a summary of the above-mentioned study, which claimed paper towels helped remove bacteria from hands (a reduction of 42%) whereas hot-air blowers were more likely to deposit and distribute disease-causing bacteria onto hands and body (an increase of up to 500%).

In the UK, where the study was carried out, the Royal Institute of

Public Health and Hygiene (RIPH) had questioned the conclusions of a similar study undertaken a year earlier — by the same university for the same industry association — because of "the size of the subject sample and the doubtful validity of analysis of the results".

While the latest study is more detailed, it's still open to criticism, according to the institute. "We do not say that warm-air hand dryers are 100% blameless. Nor do we argue that towels (paper or cloth) do a better job," RIPH says. But concerns exist about the "unscientific level" of the study and that it's been "conducted by commercial organisations with the promotion of their own products uppermost in their minds". The Royal Institute says it's pleased, however,



"that the debate is being conducted on the undisputed assumption that it is vitally important that everybody should wash their hands after going to the loo!"

Nobody can argue with that. In Australia, the microbiologists we contacted confirmed that the best way to remove bacteria from hands is to wash them with soap

or hand-washing detergent. As bacteria survive longer and are more easily transferred on moist hands, it's also important to dry them completely. If you use older types of hot-air blower with on-button, use your elbow or back rather than your hands to turn on — that's where bacteria can linger.

Fibreglass fibres under an optical microscope.



FIBREGLASS UPDATE

SINCE the Australian media reported a few months ago that in the US fibreglass had been included on a list of suspected carcinogens (cancer-causing agents), many people have contacted us to ask about the safety of insulation batts.

That fibreglass (or glasswool) may increase the cancer risk in humans is not a new revelation. The International Agency for Research on Cancer (IARC) of the World Health Organization classified 'insulation wool' such as fibreglass — and rockwool, slagwool and ceramic fibres — as being possibly carcinogenic to humans back in 1988. Studies had found increased cancer risks in rats which had fibreglass implanted in their chests. While the classification indicates that the disease could occur, it doesn't automatically establish that these substances present a risk to people in their daily lives.

Later studies of test animals exposed to fibreglass by inhalation — a more realistic exposure — showed no evidence of increased cancer risks. Geoffrey Berry, professor in epidemiology and biostatistics and head of Sydney University's Department of Public Health, says three long-term overseas studies of workers in the fibreglass industry found no evidence of increased cancer risks.

Professor Berry is also the chairman of the Insulation Wools Research Advisory Board (IWRAB). In Australia, IWRAB recently released results from a two-year study of the respiratory health of workers in Australian fibreglass and rockwool manufacturing plants. Consistent with previous international research results, the Australian study found no evidence of work-related lung disease.

If you ask the industry association or its research board, their view is that the materials in ques-

tion can be used safely. Dr Steven Corbett, the environmental health manager of the NSW Health Department, concurs. "It's a different case from asbestos. Once it's installed in a house, there's no continuing risk for the people who live there," he says.

For workers in the industry, guidelines for the safe use of synthetic mineral fibres have been in place since 1990. According to the national occupational health and safety commission, Worksafe Australia, these guidelines are the most stringent in the world. If they are observed, says its chief executive Dr Ted Emmett, "No health and safety problems should arise." (For do-it-yourself users, see the tips below.) The commission is keeping the situation under close scrutiny. "We are being prudent and regularly review the most recent scientific literature," says Dr Emmett, but so far nothing has come up to suggest the standard needs updating.

Even if serious health risks have not been confirmed, handling may cause some skin, nose, eye or throat irritations. So if you want to be on the safe side when you're installing or removing fibreglass insulation batts, follow these simple tips:

- Wear loose-fitting clothing with long sleeves, gloves and, when working overhead, goggles and head covering.
- Wear a half-face disposable respirator when working in enclosed or poorly ventilated spaces (such as under the roof).
- Store and transport batts in sealed boxes or bags (if you're insulating your ceiling, pass them unopened through the access hole).
- Use hand tools rather than power tools.
- Minimise dust release on opening and on removal.
- Wash skin with mild soap and water and wash clothes worn separately from others.

CHEESE SPARKS INFLATION FEARS

WE all know certain products require careful handling: petrol, gunpowder, gelignite and so on. We were surprised, however, to come across this sample of cheese spread that also seemed in need of the 'handle with care' treatment.

It was sent to us by Jennifer Assaf of Parramatta, NSW. She told us she bought four packets of the product from her local supermarket, took them home and put them in her fridge, where she was "horrified" to observe all four swell until they reached the state shown below, some two months before their stated use-by dates.

We found the cheese product inside had very high levels of lactobacillus, a type of bacteria commonly used in cheese production. The bugs ferment the cheese, producing large amounts of gas in the process, but they should have died before reaching supermarket shelves. Otherwise the product

continues to ferment and, if it's in a sealed packet, a cheese spread balloon is the result. It's possible the bacteria in this product originated from the green pepper that was added to the cheese.

Ms Assaf complained to the maker and received a letter of apology and a refund, but no satisfactory explanation of how she came to have four green pepper airbags in her fridge. A spokesperson for the manufacturer told us this was a completely isolated case. He said the company has had no other complaints at all and samples — which it retains to monitor for such developments — of that batch of cheese had shown no such "movement". He could only conclude the product must have been stored at relatively high temperatures at some stage, though he admitted keeping processed cheese products out of the fridge should not normally give a 'gasbag' result like this.

A cheese and pepper balloon? It probably won't burst, but for some reason bacteria used in cheese production continued to ferment this cheese spread, instead of dying off.



Corrections

INCOME PROTECTION INSURANCE

(CHOICE, July 1994)

On page 29, under 'Recommended policies' for our two scenarios for 'Susan' and 'Tim', we said a lifetime benefit period was not available with the LUMLEY policy. This is incorrect; a lifetime benefit period is available.

EXTERIOR PAINT: A LICK AND A PROMISE

(CHOICE, August 1994)

In the footnotes to the tables on pages 36-39 we stated that HOMESTEAD paints were formerly called HOME BRAND. In fact, in the eastern states of Australia it's the other way round: what was the HOMESTEAD brand is now called HOME BRAND. However, in WA it is still marketed as HOMESTEAD; this was also the case until recently in SA. We hope you're less confused than we are!



FROM OUR LAB

OUT, DAMNED SPOT! OUT!

At last we've found an unstainable carpet that's nearly as good as it claims to be.

"WHO WOULD HAVE thought the old man to have had so much blood in him?" said Lady Macbeth as she scrubbed the carpet with a mixture of eye of newt and toe of frog. The stain held fast, of course, and Ms Macbeth thought what she really needed was a carpet that could handle little accidents like this with no lasting stains as a reminder. She wasn't alone.

In the last couple of years we've tested a number of carpet cleaning products and carpets claimed to be unstainable, but none has been completely effective, particularly with bad food stains such as red wine, cordial or beetroot. In fact, many treated carpets come with guarantees that exclude virtually everything you're likely to spill on them, such as food, beverages, vomit, etc.

So when we came across a range of carpets with no exclusions in its guarantee and a promise to replace the entire carpet if you (or the manufacturer) can't get the stain out, we decided it was worth looking into.

SO HOW DID IT GO?

We bought two types of treated carpet from the CASHMERE COLLECTION made by Kruger Carpets: STRATHMORE (a heavyweight velvet plush pile) and SHERATON SUITE (a saxony plush pile). Despite faint stains being left in two of our experiments, these carpets came closer to the holy grail of 'unstainability' than anything else we've tested.

Samples of each type of carpet were marked heavily with five different substances: red lipstick, black shoe polish, orange cordial, beetroot juice and red nail polish. We left the carpet for 24 hours before trying to remove each mark with different cleaning agents recommended by the manufacturer. These included methylated spirits, nail polish remover and a half-and-half mix of bleach and warm water.

The cordial and beetroot were removed easily and the lipstick disap-

peared after some heavy rubbing. The shoe polish was first cleaned with the mixture of bleach and water, which removed some of the stain but also spread it around a bit. The methylated spirit was then applied and after a good deal of rubbing and soaking up the stain with a paper towel, all the black was removed. However, once all the metho was soaked up, there was a faint yellow stain in the area. Since our tests, Kruger has informed us it now recommends perchloroethylene (a dry cleaning fluid) instead of methylated spirits for oil-based stains such as shoe polish and lipstick.

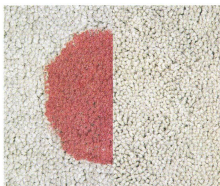
The nail polish was the most difficult to remove. Kruger recommends using nail polish remover, but after 20 minutes of rubbing and soaking up the stain with a paper towel, it had spread slightly and only a little had been removed. Although methylated spirits wasn't recommended for this type of stain, we tried it and removed virtually all the stain, leaving only a faint pink mark.

MOPPING UP THE MESS

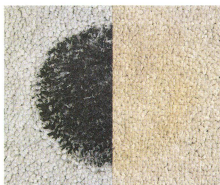
Past CHOICE tests have found if someone (or something) has trodden loose dirt through your carpet, it doesn't really matter how long you wait to clean it up, but with food stains and oil-based stains it's important to get cracking straightaway. The longer it has to soak into the carpet, the harder it is to get out.

First mop up as much of the spill as you can with a paper towel, cloth or sponge. If there's a stain already, you will need to use a cleaning solution suitable for that particular type of stain. When cleaning up the stain, remember to work from the outside in to stop it spreading.

The March 1994 issue of CHOICE has an article on buying carpets, *Wall to wall shopping*, which gives some more detailed information on what cleaners are good for what stains, while in September 1992 we published a test report of spot cleaners for carpets. □



Beetroot: before and after



Shoe polish: before and after



Nail polish: before and after

■ STRATHMORE

Type: Heavyweight velvet plush pile made from a polypropylene derivative.
Price: \$189 per metre*

■ SHERATON SUITE

Type: Saxony plush pile made from a polypropylene derivative.
Price: \$169 per metre*

*Prices shown are those given by the manufacturer as typical. If you have difficulty finding a local store that stocks these carpets you can call Kruger Carpets on (02) 630 7799 to find the nearest shop.



DRIVELINES

GETTING THE LEAD OUT

One major petrol supplier recently modified its refineries to halve the lead content of its leaded petrol. This is great news for our health, the environment and people who own cars that can't use unleaded petrol — when will the other petrol companies follow?

BACK IN JULY of this year, Shell's NSW and Victorian refineries began shipping leaded petrol containing significantly less lead than the current average. Shell's 'half lead' petrol, which entirely replaces its previous leaded fuel, contains lead levels of 0.15 and 0.125 grams per litre in NSW and Victoria respectively. This is half the current levels set down in an industry and government-agreed lead-reduction program (see next page), designed to gradually lower the lead content in petrol in Australia over the next few years.

Shell's pre-emptive move, welcomed by government environment agencies, is the result of a major capital investment to upgrade the capabilities of its two refineries at Geelong in Victoria and Clyde in NSW. This allows the refining of a petrol with essentially the same properties as full-lead petrol, but with less lead.

Why add lead at all?

Since 1986 all new cars sold in Australia have been designed to run on petrol that doesn't contain any lead, but many cars made before this require lead in petrol to operate properly.

Traditionally lead is added to petrol for two reasons: it helps the petrol burn more evenly and, in some older cars, is used to lubricate particular engine parts and minimise wear. The amount of lead needed for lubrication, however, is minimal. Some experts say lead levels of 0.05 grams per litre (g/L) or even lower would be sufficient.

The problem of even burning is more complex. The ability of petrol to burn smoothly under defined conditions is related to a characteristic known as its octane rating, and is commonly measured in terms of the petrol's research

octane number, or RON. In Australia unleaded petrol has an octane rating of around 91 RON, but many older cars require petrol with a higher octane rating. Lead increases the octane rating of a petrol and is used to bring the petrol up to a rating of around 96 RON to make it suitable for older cars.

One way of increasing the octane

rating without adding high levels of lead is by increasing the level of substances known as aromatics. The aromatic compounds help the petrol to burn evenly, but when they are broken down the by-products include benzene, a known carcinogen.

Producing sufficient quantities of higher-octane petrol without the need to



Half lead is good, but still not as good as no lead at all. Check our list over the page of cars that can use unleaded petrol.

add high levels of lead or increase aromatic content is currently beyond the capabilities of most Australian refineries. The upgrades carried out at Shell's refineries, however, have enabled it to refine a petrol which maintains the high octane rating needed by some older cars without significantly increasing benzene emissions, while using only half the previous level of lead. In all other respects Shell's half lead has the same characteristics as other leaded petrol sold in Australia.

Will it affect engine performance?

Shell claims the new petrol will have no effect on the running of any car which needs to use leaded petrol. The NRMA and RACV agree, and feel motorists won't notice any difference when running on half lead. The octane rating has been kept the same and there is more than enough lead for lubrication.

In fact many motorists in NSW and Victoria will be running on half lead without even knowing. The Shell refineries supply a large proportion of all petrol sold in the two states, not just that sold at its own stations.

Lead reduction timetable

A timetable for generally reducing lead levels in petrol was agreed at a round-table forum held last year. At the start of 1994 the octane rating of all leaded petrol was dropped from 97 to 96 RON, allowing petrol companies to lower lead levels slightly without needing to change their existing refinery equipment. In NSW, for example, lead was dropped from 0.4 to 0.3 g/L; other states had similar drops. The timetable calls for a further reduction in lead to 0.2 g/L in NSW and Victoria by the end of this year, and in all other states and territories by the end of 1995. This will be done without a further decrease in the octane rating but will require major upgrades to most refineries. While Shell has, to its credit, leapfrogged the timetable, all other petrol companies involved assure us they're well on track to comply with the agreed lead reduction requirements.

Lead is a cumulative poison and emissions from car exhausts are the major source of environmental lead pollution, so the faster the amount of lead in petrol is lowered the better. Shell's move should have an immediate effect on the air quality in NSW and Victoria. At the beginning of this year when the level of lead in petrol in NSW dropped from 0.4 to 0.3 g/L, the NSW Environment Protection Agency says it measured a corresponding 25% drop in airborne lead within three months of the change.

No lead is better

While some pre-1986 cars need leaded petrol to run correctly, many will cruise along happily on unleaded. The table opposite (previously printed in our October 1993 issue) is a list of pre-1986 cars which can use unleaded petrol. If your car is on the list and you're still using leaded petrol, make the switch now and save some money. As of August this year a Commonwealth Government excise made leaded petrol, including Shell half lead, two cents per litre dearer than unleaded. If your car isn't listed, ring the manufacturer and double-check. They may be able to advise you of a method of conversion.

The ultimate aim is the phasing out of leaded petrol altogether. In February of this year, sales of unleaded for the first time exceeded those of leaded petrol and, as older cars are retired and the monetary incentive to use unleaded bites, this trend is expected to continue. Most petrol companies predict a gradual decline in leaded petrol sales over the next few years, leading to an end to production around or just after 2000.

Lead is not the only environmental problem posed by car use. Removing lead from car emissions does not reduce the levels of other pollutants, but it is worthwhile and should significantly improve our air quality. Shell's initiative in pressing ahead with its refinery upgrades and lowering lead levels ahead of and beyond that called for in the timetable deserves praise and is a welcome benchmark for other petrol companies to work towards.

Responsible motoring

Regardless of the type of petrol your car uses, here are some simple measures you can take to minimise exhaust emissions:

■ **Have your car regularly serviced and tuned.** A poorly tuned engine will increase exhaust emissions and cost you money by increasing fuel consumption.

■ **Check the tyre pressures as often as possible.** Apart from being a potential safety problem, underinflated tyres can increase your fuel consumption.

■ **Drive as smoothly as possible.** Gradual acceleration and deceleration can significantly improve fuel economy and make for less wear and tear on the car.

■ **Try walking for short journeys.** If you're just popping down to the corner shop or some similar short trip, try to resist the temptation to hop in the car and walk instead. As well as providing you with exercise, lowering your car use is a very effective way of lowering emissions. □

Who can use unleaded?

Cars made from 1986 on run on unleaded petrol only. If you have a car currently running on leaded petrol you may be able to use unleaded petrol in it without modifications. The following list comes from the Federal Chamber of Automotive Industries. Some of these models can only use unleaded petrol if they get a regular dose of leaded petrol as well or have minor adjustments made — contact the distributor to find out if the information isn't included here.

Make/model Models which can use unleaded petrol

Audi

80 Fox	1977 onwards
100SE	1978/1979

BMW

The following vehicles can use premium unleaded petrol

2002	Sept 1975–March 1976*
318i	Sept 1982–Sept 1985*
320i	4-cylinder Sept 1975–Aug 1977
320i	6-cylinder (UK spec.) Sept 1977–Aug 1982*
320i	4-cylinder Oct 1975–March 1978
323i	Jan 1978–Sept 1985*
520i	April 1981–Sept 1985*
528i	Aug 1977–Sept 1985*

*Leaded petrol should be used at every fifth fill.

Daihatsu

Charade	G10, G11 Series
Delta Trucks	V60, V67, V68 Series 1978 onwards
Handivan	L60 Series 1982 onwards
Hi-Jet	S60, S65, S70, S75 Series 1978 onwards, S76 Series 1984 onwards
Rocky	F80, F85 Series 1984 onwards

Ford

Laser/Meteor	June 1984 onwards (except Laser sport and Meteor with high performance engine)
Telstar, TX5	June 1983 onwards
Econovan 1 L	March 1984 onwards
Spectron 1 L	March 1984 onwards
Courier 2 L	June 1983 onwards

Holden

Astra	LB Series 1.5L
Drover	QB Series 1.3L (manual)
Gemini	TX, TC, TD, TE, TF, TG Series 1.6L
Jackaroo	UBS Series 2L (manual)
Rodeo	KB Series 1.6, 2L (manual)
Shuttle	WFR Series 1.8L (manual)

Honda

Use leaded petrol every third fill

Accord, Acty, Civic	1978 onwards
Prelude	1980 onwards



Jaguar & Daimler

The following vehicles can run on *premium* unleaded petrol. Adjustment of ignition timing and/or engine modifications should be carried out by Jaguar franchised dealers only.

J5 HE	V12 (5.3) 1975-1981, V12 HE (5.3) 1981-1989
J5, Sovereign and Daimler	6-Cylinder (4.2) 1968-1986, V12 (5.3) 1975-1981, V12 HE (5.3) 1981-1989

Lexus

23	1983 onwards (except 'SS' series)
23 wagon	1983 onwards
26	1983 onwards
29	1983 onwards (except EGI fuel injection)
29 wagon	1982 onwards (except fuel injection)
3200	1982 onwards
3100/E2000	1984 onwards
3200, RX-3, RX-4, RX-5	All
3200	1979 onwards

Mercedes-Benz

The following information applies to Australian-specification vehicles only. Owners of vehicles not imported through Mercedes-Benz Australia would need to check their vehicle with the company.

80 SE Saloon	
80 SEL Saloon	September 1981 onwards
80SEC Coupe	
80SL Roadster	
230E Saloon	February 1984 onwards
230TE Station wagon	
280 SE (W116 and 126) Saloon	
280E (W123) Saloon	Before August 1982 (W116 from May 1978)
280CE (W123) Coupe	
280 TE (W123) Station wagon	
Vehicles suitable for unleaded petrol operation provided leaded petrol is used for every fifth fill.	
80 SE Saloon	Before September 1981
80SEL Saloon	
80SL Roadster	
230E Saloon	Before January 1984
230TE Station wagon	
280SE (W126) Saloon	
280E (W123) Saloon	September 1982 onwards
280CE (W123) Coupe	
280 TE (W123) Station wagon	
250 (W123) Saloon	All

Mitsubishi (including Chrysler)

Scorpion	1979-84, GH, GJ, GK, GL, 2.6L
Colt	1979-85, RA, RB, RC, 1.4L, 1.6L
Cordia	1983-84, AA, 1.6L
Lancer	1974-79, LA, LB, LC, 1.2L, 1.4L, 1.6L
Galant	1970-76, A51, GA, GB, GC, GD, 1.3L, 1.4L, 1.5L, 1.6L
L300 Express	1980-85, SA, SB, SC, SD, 1.6L, 1.8L
L200 Express	1979-85, MA, MB, MC, MD, 1.6L
Pajero	1983-85, 2.6L
Sigma	1977 GG, 1.6L, 1.85L, 2.6L; 1979-84, GE, GH, GJ, GK, 2.6L; 1980 GH, 1.6L; 1982 GJ, 1.6L; 1984 GK, 1.6L

Nissan (including Datsun)

Pulsar van	E13
Pulsar sedan	E15
Pulsar hatch	E13, E15
Pulsar ET hatchback EXA	E15 ET
Prairie	E15
Gazelle	CA20E
Skyline	L24E
300C, 300ZX	VG30E
Half-tonne ute	A12
Vanette	A15
Urvan	Z20 only
720	L18, Z22
Patrol	L28 only
Castbar	Z20, Z22
Bluebird	1983 L20B (no EAI) series 1
200B	L20B
280C, 280ZX	L28 E
Stanza	L16
120V	A12
Sunny	A12
Sunny van	A14, C20, A12

Porsche

For all these models, Porsche recommends using one tankful of leaded petrol after every three tankfuls of *premium* unleaded petrol. The minimum fuel octane requirement specified in the pertinent owner's manual is always the decisive point as to whether or not unleaded petrol (91-93 RON) can be used.

911T, 911E	1972-73
911S, 911	1972-77
911 Carrera 2.7	1972-75
911 Carrera 3.0	1976-77
911 SC 3.0	1978-79
928	1978-79

Rover

3500 SDI	All
Quintet	All
Land Rover	8.13:1 Compression ratio engines only
Range Rover	8.13:1 Compression ratio engines only

Subaru

1800 Sedan & S. wagon	(EA81) 1980-84, including MV Brumby-1985
Sherpa 700	(EK42) 1982-85
1800 "L" Series	(EA82) with carburettor 1985
1800	(EA82) XT vortex, turbo, fuel injected-1985*
*Use <i>premium</i> unleaded petrol.	

Suzuki

Carry	ST90 Series 1980 onwards
Hatch	540 cc and 800 cc
Sierra	1.0L, 1.3L
Swift	1.0L

Toyota

Celica (21R-C engine)	1981-1983, RA 60
Corolla (3K-C eng)	1974-1978, KE 30, KE 35, KE 36
Corolla Liftback (3K-C eng)	1977-1978, KE 50
Corolla (4K-C eng)	1978-1980, KE 55, KE 38; 1981-1984, KE 70
Corolla (2A-C eng)	1985 Refer owner's manual for details
Corolla (4A-C eng)	
T18 Liftback (3T-C eng)	1979-1983, TE 72
Corona 2 Litre (21R-C eng)	1981-1983, RT 132, RT 133
Corona MK-2 (4M eng)	1976-1977, MX 13, MX23
Cressida (4M eng)	1977-1980, MX 32, MX 36
Cressida (5M-E eng*)	1980-1983, MX 62
Crown (4M eng)	1977-1980, MS 83, MS 85
Crown (5M-E eng*)	1980-1983, MS 111, MS 112
*Up to engine no. 5M-3429547	
Hiace (3Y eng)	YH 51/61/71, June 1984 onwards
Liteace (4K, 4K-C eng)	KM20
Coaster Bus (22R eng)	RB20, 1982 onwards
Hilux (3Y eng)	YN57/60/65 series, October 1984 onwards
Hilux (1Y, 1Y-C eng)	YN55 series
Tarago (3Y eng) 2 litre	YR21
Land Cruiser	FJ62/70/73/75, 1985 onwards
Land Cruiser New Model (22R eng)	RJ70, 1985 onwards
Dyna	YU60
Landcruiser (2F Engine)	FJ40/60 manufactured specifically for sale in NSW after 1977; other states after 1979

Triumph

Stag	July 1976 onwards
TR7	All

Volkswagen

Golf	1977 onwards
Kombi	CV engine, 1978-79
Microbus	CV engine, 1982-83
Transporter	DH watercooled
Passat	1977 onwards

Childcare

Childcare is big business in the 1990s. It is also an issue of major importance for working parents, who need to find care for their children that is affordable, appropriate and of the highest possible quality. This major CHOICE report is a comprehensive guide to what's available and how to make the right choice.



choices

In this report we examine:

- The different types of childcare available in Australia.
- How much childcare costs.
- The forms of government assistance available to help families meet those costs.
- The roles played by different levels of government in the regulation of childcare.

In next month's CHOICE we continue this major survey with:

- The debate about quality care.
- How parents can assess all available childcare options to make the right choice for their children and themselves.

THE SIGNIFICANT INCREASE in the number of women in the paid workforce over the past decade means there is a growing number of families in which both parents (or the only parent) work. This trend results in the pre-school-aged children of working parents spending some of their time in childcare. Children who are placed in childcare from when they are babies until they reach school spend thousands of hours in childcare. And if you're paying around \$120 a week for full-time care for one child (see *Counting the costs* on page 17), you will spend around \$30,000 (\$120 per week x 48 weeks per year x 5 years) on childcare by the time that child starts school.

Making the decision to put a child in care at all, and then the task of choosing the best centre or scheme, are complicated further by the sometimes overwhelming emotions of fear, anxiety and guilt for most working parents. How can you be sure your child's physical, intellectual and social development is being nurtured while they're in childcare? Will your child be left to cry or be struck down by any number of illnesses caught at care? Can anyone else care for your son or daughter properly at all? In other words, parents often attempt to choose childcare in a state of doubt and confusion, even though it is a major investment in their child's development and happiness and in their own sanity and well-being, not to mention in dollars and cents.

Such an important emotional and financial decision shouldn't have to be based on 'gut feelings', yet 34% of the people who responded to the national

CHOICE Childcare Survey said such feelings played a part in their decision to choose a particular type of childcare. Nor should parents feel pressured to take the first childcare 'place' that comes along, but long waiting lists and the lack of childcare services in remote communities often mean parents have no choice but to take what they're given.

For those who are fortunate enough to have a choice, it is possible to reduce the pressures and feelings of guilt when choosing childcare, by ensuring the decision you make is well-researched and well-reasoned. The first step is to thoroughly understand all the options available. Do you really understand the difference between a long-daycare centre and a pre-school or kindergarten? How much will the different types of childcare cost and will the type you select have an impact on the government assistance with fees that you're entitled to? How is the childcare industry regulated in Australia? Who is making sure your child is being cared for in a safe, stimulating and hygienic environment by well-qualified

and experienced staff? This month's report answers these questions.

Once you have an understanding of the big picture, it's time to begin the search for the best childcare service. Do you want your child to have one-on-one care or does he or she need interaction with other children and plenty of stimulating activities? Does your child have special needs and, if so, which childcare services can best cater for them? Do you understand what is meant by the phrase **quality care**? How many centres or carers should you visit before making a choice? What questions should you ask on such visits and how will you recognise the 'right' answers? Next month's report, *The search for quality childcare*, explores each of these issues.

If the search for the best possible childcare arrangement seems like an excursion through a minefield, don't despair. Use our two reports to assess the childcare options available and then to choose an arrangement that will best meet your needs and the needs of your children.

THANK YOU

The response to our national Childcare Survey was overwhelming. Our survey appeared in the November 1993 issue of CHOICE and was also directly mailed to 3000 non-subscribers. We received almost 2500 responses in total. The response rate to our direct mailout was an extremely high 36%. Some respondents went to the trouble of photocopying their survey forms and passing them on to other people. Others attached letters to their survey forms outlining their opinions about childcare in great depth.

Your replies indicate that childcare is an issue of great importance for many people. The survey results, including many quotes from survey respondents, are woven through our reports. We'd like to take this opportunity to say thank you for your contributions. We hope the reports do justice to the problems you confront when 'shopping' for childcare and answer many of your questions.

Finding out your options

The search for childcare involves learning as much as you can about the different types of care available and about how different services are regulated and administered. But start exploring your options early — the system is fragmented and you may discover your choices are limited.

"OUR MIDDLE DAUGHTER attends a half-day pre-school (three hours per day, five days a week). She has developed outstanding skills and is ready and eager for 'big' school. She learns Japanese, nature studies and has improved verbally and physically. But, this arrangement is difficult on all family members, especially when both parents work. The fees are cheap but the stress involved in getting her there makes this system a nightmare at times." — KS, NSW.

Ideally you want to find a childcare service that gives your child a nurturing, safe and stimulating environment. But, as KS points out, the best type of service for the child may not necessarily be in the most convenient location or supply the most appropriate hours of care for

the parents. It's a good idea to have a basic understanding of your requirements before you start exploring the options (see *What you need* on page 18 for a list of points to consider). The quest for childcare then involves matching your family's specific requirements with:

1. The most appropriate **type** of childcare, and then
2. The best **individual service** available to you within that childcare type.

There are significant differences between the various types of childcare available in Australia. There can also be significant differences between community-based childcare services and those provided by private companies or operators. And finally, there are major differences in the ways childcare services in different states and local government areas are administered and regulated. On

top of all this, there is not enough quality information available to assist parents who are attempting to understand how childcare services work in order to make an informed choice. That explains why many parents who replied to our survey relied on gut feelings and recommendations from family or friends when assessing the suitability of different types of childcare.

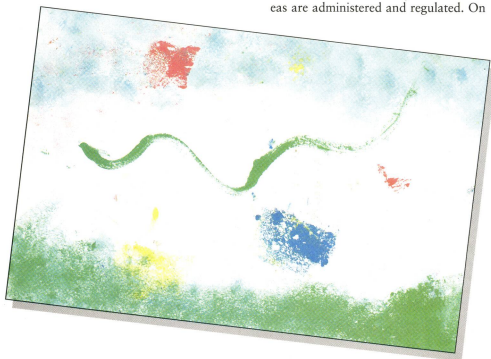
When you have no options

"Childcare is very hard to come by. I have been waiting for over a year and my son is not in good childcare yet. We are still on waiting lists for over nine centres." EK, NSW.

Almost 20% of parents in the national CHOICE Childcare Survey reported having **no options** at all when it came to choosing between different types of childcare — the equivalent of 'any colour as long as it's black'. Our survey results indicate that there is a serious deficiency of childcare services in rural communities and remote areas. Over the past decade, the Commonwealth Government has announced several initiatives to increase the supply of childcare services available in Australia. However, until the government's election promises and budget initiatives result in more childcare services in remote areas, parents who live in those communities will continue to have very limited choices, if any.

Our survey indicates that even people who live in areas with a comparatively high number of childcare services available often find themselves settling for second-best because there are prohibitively long waiting lists for their preferred centres or services. Over 20% of our survey respondents reported not getting their first childcare choice. Again, parents living in isolated areas have the lowest chance of getting what they want. Surprisingly, though, people living in capital cities reported more difficulty obtaining their first choice than those living in regional cities and towns.

The parents who did not get their first choice usually wanted a place in a family daycare scheme or long-daycare centre. The long-term solution to this problem is for the Commonwealth and state governments to fund the development of more childcare services. Meanwhile, parents need to put their names down on waiting lists as early as possible if they are to have any hope of obtaining their first choice.



What type of childcare?

If you're fortunate enough to live in an area where there are different types of childcare available, it's worthwhile finding out what the various types have to offer your family.

SOME PARENTS will choose to use private arrangements, including care by family or friends or perhaps employing a nanny. Others will use formal services including family daycare schemes, long-daycare centres, pre-schools or kindergartens, which are bound by government regulations and guidelines. There are advantages and disadvantages involved with using each type of service.

Keeping it in the family

"Mum is excellent but getting very old. I worry that I am running her down very quickly as two of my three kids are very hyperactive, but I know no-one else would have the patience with my children ... The only thing of concern is wondering what I could do should my aging mum's health completely fail, as I am a single mum and couldn't afford childcare, nor would I trust an outsider." — CK, Victoria.

Just over 10% of our survey respondents used private care arrangements, including family or friends. They tended to have lower incomes than those who used long-daycare centres. CK is extremely satisfied with the quality of care her elderly mother gives to her three demanding children, one of whom has special needs. "Mum is so patient and wonderfully maternal, plus her years of experience are priceless ... All of my children have spoken and progressed much faster than any kids their age due to Mum's constant teaching and playing with them."

Having a relative or friend care for your children can be a flexible and inexpensive arrangement. Another advantage is that you're leaving your children with someone you know and trust — you know exactly how reliable the carer is. However, CK's experience also shows some of the downside of relying on family or friends to care for your children while you're at work — guilt and worry about the well-being of the carer and

anxiety about how long they'll be able to continue. In her book *Guide to Childcare in Australia*, Rosemary Lever encourages anyone contemplating using private care to ask why the person wants to care for your child. If your answers to any of the following questions give you any negative vibes, you might want to look at other options.

■ Is it to 'help' you? Will you be or feel obligated?

■ Are they mainly doing it because they need the money?

■ Are they looking for an interest rather than genuinely concerned for your child?

■ How long do they plan or will they be able to continue, especially if they're grandparents? Is the carer fit and healthy? Energetic?

■ Do you see things the same way? Do you get along most of the time? Can you say how you want your child to be looked after?

Employing a nanny or babysitter

Only 4.5% of respondents to our survey used a private nanny or babysitter. They tended to be used by people with higher

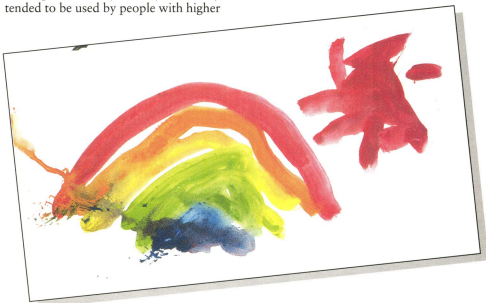
incomes and with children under the age of three. The parents who replied to our survey had varying opinions about the advantages and disadvantages of employing a nanny.

"The most stable of childcare arrangements has been the 'paid' nanny. She is an older, retired woman who has no children but has looked after all three of ours for nine years. The stability of someone who can come on sick days, school 'student-free' days, after school and for evening babysitting is perfect. Our third child needed much more stimulation than this nanny could give alone, hence a combination of centre-based care and home care is ideal." — PF, Victoria.

Other parents have been less pleased with the nanny experience. "Well, I am so fed up with finding someone to look after my girls I resigned two weeks ago. Kids need a stable environment. My eldest is about to start school and my nanny was not interested at all in following through for preparation. I have had four nannies over the years and they are only interested in the pay packet," writes CS, Victoria.

According to JS of NSW, "When employing a nanny, it was very costly due to having to pay the nanny's workers' compensation coverage, superannuation and tax. We tried to do things legally but the costs are limiting."

Employing a nanny is one way of ensuring your child can be cared for at home. Nannies can be found through the classified advertisement sections of daily newspapers or you can engage the services of a nanny agency or employ-



ment agency. Expect to shell out \$350 to \$600 a week in wages for a qualified nanny, and as JS points out, by choosing a nanny you are entering a contract of employment and may be liable for superannuation, workers' compensation and public liability insurance. Another point to consider is that privately employed nannies do not have to comply with the government regulations and guidelines set down for formal childcare services.

Long-daycare centres

The type of childcare most frequently used by the parents who replied to our survey was the long-daycare centre (37%). The predominance of long daycare was most apparent in the inner city and suburbs. People with children over three years of age were also more likely to use long-daycare centres.

Long-daycare centres may also be called day nurseries, daycare centres or creches. They provide childcare for children below school age in a group setting. Centres are operated on a community basis receiving government funding (state/Commonwealth), on an employer-supported non-profit basis or as a commercial enterprise. Care arrangements vary in long-daycare centres, including small family groupings, or, in larger centres, children will be grouped according to their age.

These centres are licensed under state

or territory childcare laws. Generally speaking, a centre must provide care for at least eight hours a day and at least 48 weeks a year.

Some of the parents who replied to our survey were very happy with the care their children received in a long-daycare centre. "I am completely happy with the childcare centre I send my little girl to. The facilities are excellent and the staff are the most friendly and caring people you could want," wrote JP of Victoria. She reported being very satisfied with the way the centre is administered, the experience and qualifications of the staff, the premises and the play and learning materials.

Other parents are not so happy with the long-daycare centres they use. "In the first creche I had my daughter in, the cots were in the same room that the children played in. She wasn't sleeping and got sick. I felt the children were left in the cots most of the time to play whereas I believe they should be in a separate room for sleep only. In the creche I use now, the room for the 0 to two-year-olds is not big enough and everyone who enters the centre has to go through this room," reports CA of Victoria.

MS of NSW has a two-year-old child in a commercially operated long-daycare centre. She says she has no choice of childcare centre, but is dissatisfied with the way the centre is administered, the qualifications and experience of its

staff, the standard of the premises and play and learning material. She writes, "There is broken equipment and the grass is not mown regularly. Because the owner speaks broken English, it is very hard for the children." When MS attempted to complain to the centre's management, she says, "It was like talking to a stack of bricks as no one could understand. The place is run-down and untidy. When the government gives the centre a subsidy of approximately \$45,000 a year and the centre and equipment are in the conditions they are, where does the money go?"

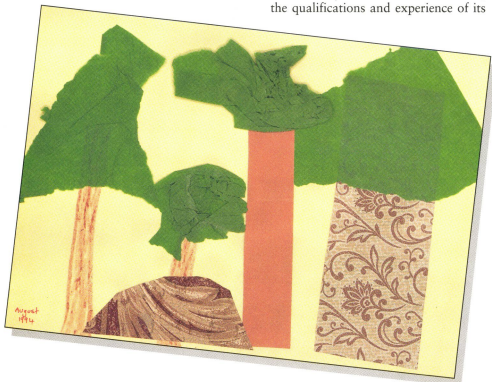
Pre-schools and kindergartens

Pre-schools and kindergartens were used by almost 20% of the people who replied to our survey. This type of childcare centre was more prevalent in smaller communities and was favoured by people with lower incomes. Pre-schools and kindergartens are the oldest type of childcare in Australia, with the earliest centres being established in the 1890s in inner-city areas. Responsibility for funding this type of childcare service passed from the Commonwealth to the state governments in 1986. Traditionally they have only provided half-day places, which has meant they are not ideal for many working parents.

According to Rosemary Lever, the pre-school movement has always worked for the benefit of the community, and staff have always taken pains to ensure services are "uplifting, educational and developmental, not just child-minding centres". She says kindergarten is still the big step before school for many children and has almost become a prerequisite for starting school in most states.

Many of the parents who completed our survey couldn't be happier with the pre-schools they use. For example, AR of NSW writes, "Our pre-school building is 20 years old but constant improvements are being made. Staff members are always looking for new and varied materials that are learning-based. Every effort is made to cater for individuals. Staff are actively involved in improving the centre, themselves and its facilities."

However, some parents report their pre-schools aren't providing the stimulation that three and four-year-old children need. "My child is not stimulated enough. She enjoys challenges and kindly lacks new ones. And she has another year to go!" — DT, WA.



Family daycare

In our survey, family daycare was used by about 20% of respondents and seemed to be favoured by parents with children under the age of three. This may be because family daycare services allow the child to be cared for in a home or family environment instead of in a centre. Home-based childcare workers are organised and approved by a sponsoring family daycare agency — usually a local council. The carers are supported and supervised by regular visits from the co-ordinating agency.

There are regulations governing the number of children a home-based childcare worker can care for, and schemes must comply with safety guidelines and restrictions which apply to the carer's home. The central agency puts parents in touch with several family daycare workers that they can visit before making a choice.

In most schemes carers aren't employed by the co-ordinating unit; they are self-employed. Care is usually regular full-time or part-time but may include up to 24-hour care, occasional care, emergency care and before and after-school care. A scheme must offer care for at least eight hours a day on all normal working days and for at least 48 weeks a year. The care offered must be consistent with the physical, emotional and development needs of the children. Parents should also be given the opportunity to participate in the management of the scheme.

JD of Victoria reports being very satisfied with her family daycare scheme. "The caregiver is very particular about safety. She also goes to a lot of trouble with age-appropriate toys and play activities. I am very satisfied with my present childcare arrangements because of the integrity of the caregiver herself and her gift with children. Emotional needs are high on her priority list. I had experience with two childcare centres with my older child. Both were less than satisfactory due to minimal staffing levels and lack of individual care and concern."

While SH of SA is very satisfied with her family daycare mother, she had this to say about the way the scheme is managed: "Within the family daycare scheme, the individual carers do not seem to receive a lot of resources like paints from the central administration and are left to carry the costs of providing play and learning materials."

Occasional care

This type of childcare is provided on an occasional basis in purpose-built centres, neighbourhood houses or parent co-operatives. There are generally restrictions on the number of hours occasional care can be used by any child each week. It is provided for children not yet at school whose parents are not in the workforce or are in the workforce but only require childcare for short periods. To receive Commonwealth Government funding, a centre must be run by a community-managed organisation on a not-for-profit basis. Parents can leave their child at an occasional care centre while they attend appointments, go shopping or just give themselves a break. It also gives children an opportunity to play with others.

Before and after school hours and vacation care

This type of care is provided for primary-school-age children, often while their parents work or study. Services generally operate in primary schools, community centres or halls. Care, including age-appropriate activities, is provided before and/or after school and/or in school vacation periods, under the supervision of staff. Guidelines are set by each state government suggesting staff/child ratios. The Commonwealth

Department of Human Services and Health is now giving funding priority to a new model called 'year-round outside-school-hours care', in which all care that is required outside school hours, including vacation care, can be organised through a single contact point — contact your state's branch of the department for details.

A different system of Childcare Assistance (fee relief) applies in out-of-school-hours care services (see *Counting the costs* on page 17), and there is no Special Childcare Assistance for users of this type of service. This can mean some families pay more for a few hours of after-school care than they do for a full week of long daycare. We agree with the recent Law Reform Commission discussion paper which proposed that all outside-school-hours care services should offer Commonwealth Childcare Assistance to eligible families.

Children with special needs

Supplementary services are available to improve the capacity of childcare services to provide care to children with special needs through the provision of a special program, training and/or facilities. Discuss your child's special needs with your different services and their eligibility for support or funding.



Community or private childcare?

"In my experience, there is no contest between public and private childcare services. The private kindy/daycare felt, looked and was uncaring and money-hungry. But it was my only option while I waited for space in a government-funded long-daycare centre. Here, they nurture him, cuddle him, cook a hot lunch as well as breakfast and afternoon tea. He is cuddled and loved and happy — so am I!" — DR, NSW.

What is the difference between community-based childcare and private childcare? Briefly, community-based centres or schemes can be run by local councils, parent collectives, churches or charities. They are non-profit and reliant on government grants and fund-raising to cover operating expenses, including wages, that aren't covered by the fees parents pay. Employers can also sponsor a centre or scheme on a not-for-profit basis. Other centres are run by private individuals or companies on a for-profit basis. Private centres can still receive government funding if they comply with certain regulations and guidelines (see *Who cares about childcare?* on page 18). However, the owner of the centre would pay for the building, equipment and wages.

Some advocates for children's services argue that the profit motive prevents privately operated centres from making the supply of quality care to children and parents their highest priority. Others give examples of private operators who

are dedicated to supplying the best possible service. One of our NSW survey respondents wrote of her private long-daycare centre: "My child receives good care in a stimulating atmosphere in a class of children her own age ... I find it very supportive and reassuring for myself too."

It's important for parents to shop around and use their judgment if they have the luxury of a number of centres or schemes to choose from. Our survey respondents rated government-funded centres higher than private operations for overall satisfaction, although both types rated fairly well.

Waiting in line

On average, respondents to our survey reported waiting just under four and a half months for a place in a childcare service. The length of wait tended to increase with income and population density, which is to be expected because of the Commonwealth Government's priority of access guidelines (explained below). Western Australia had the shortest waiting periods and NSW the longest. Parents who had children with disabilities did not report that they had to wait longer to find childcare.

Why do some parents have to wait longer for a childcare place than others? The number of childcare services in your area and the demand for places in those services is one obvious factor. Another affecting how long you will have to wait

for childcare is the Commonwealth Government's priority of access guidelines, which services must follow when allocating places. The guidelines require services to give preference to families in which:

- The sole parent is, or both parents are, employed, looking for employment, studying or training for future employment.
- The children or the parents have a continuing disability or incapacity.
- The children are at risk of serious abuse or neglect.
- The parents are at home with more than one child below school age or there is a sole parent at home.

The guidelines state that services need to assess priority within each of these groups and give particular consideration to families on lower incomes, Aboriginal and Torres Strait Islander families, families of non-English speaking backgrounds, sole parents or socially isolated parents. Service providers don't have to keep official waiting lists, which makes it difficult for the government to monitor or enforce the guidelines.

Parents just have to be persistent. Once you're on a waiting list, don't wait to hear from the service. Call it periodically to reinforce the fact that you genuinely need care and to check on whether you've made any progress up the waiting list. Be sure to put your name on as many lists as possible to ensure you get a place in time to return to work.



Counting the costs

How much can you expect to pay for childcare? What fee assistance is available for low and middle-income families? And who is responsible for funding the development of childcare services?

ACCORDING TO our survey, the average hourly cost of childcare was just under \$3. Some consumers have access to free childcare, usually through private arrangements with family or friends. Others report paying up to \$15 per hour, usually for a nanny. The average weekly cost of childcare worked out at around \$120 for a 40-hour week. If you're planning to employ a nanny, you could be paying a weekly wage of up to \$600.

The Commonwealth Government does assist lower and middle-income families with the cost of childcare. Except for the Childcare Cash Rebate (see below), the money is given to the centres and services, which then reduce families' fees as appropriate to their situation.

Childcare Assistance (formerly called Fee Relief) is available to help meet the cost of childcare for parents who use Commonwealth-approved services. The amount of assistance a family is eligible for depends on three factors: family income, the number of dependent children and the number of dependent children in childcare. Childcare Assistance eligibility cuts off when the family's gross weekly income exceeds \$1157 for one dependent child who is in care and \$1401 for two dependent children who are both in care. The income limits are higher for families with more than two dependent children. The maximum childcare fee for which Childcare Assistance is paid is \$2.20 an hour (\$110 for 50 hours a week).

Apply for Childcare Assistance to the Department of Social Security; you will have to reapply each year as entitlement expires every March 31.

In approved out-of-school-hours care services the Commonwealth Childcare Assistance paid is 68 cents per hour per child for families receiving full Additional Family Payments, or 36 cents for those getting part Additional Family Payments.

The introduction of the new **Childcare Cash Rebate** is the first time the

Commonwealth Government has acknowledged that childcare is a work-related expense for many families, and should be subsidised in the same way as other expenses are tax-deductible or refundable.

The rebate was announced in February 1993 as an election promise. It was confirmed in the 1993 budget and the scheme commenced on July 1, 1994. The rebate is now available for a family's work-related childcare expenses for children up to and including 12-year-olds. 'Work' includes full or part-time work, study, training and looking for work, and being in receipt of various benefits.

The childcare for which costs can be claimed includes care provided in children's services and centres and through private arrangements by babysitters or nannies, as long as they can meet state and territory standards, the carer is over 18 years old and has an approved carer provider number.

The rebate scheme is administered by the Health Insurance Commission. It establishes the eligibility of carers and applicants and pays the rebates. Families can claim the rebate by mail or in person through local Medicare offices. It is not means-tested.

Calculation of the rebate is complicated. It is 30% of claimable weekly childcare costs in excess of \$16. The ceiling on claimable costs is the same as the Childcare Assistance ceiling for one child (currently \$110 a week) and twice that amount for two or more children in care, so the maximum Childcare Rebate will be \$28.20 and \$61.20 a week respectively. If a family receives Childcare Assistance, the rebate is paid on the amount paid by the family after taking into account the amount of Childcare Assistance paid on its behalf.

Childcare services providing long daycare, including family daycare and occasional care, may claim **Special Childcare Assistance** (SCA) from the

Commonwealth Government for families suffering sudden, severe short-term financial difficulty or for children at risk of serious abuse or neglect where families can't or won't pay fees. This enables the service to reduce the fees families have to pay. The maximum period for which SCA is available is 13 weeks in any one year (longer periods require approval from the Department of Human Services and Health). The service assesses whether the family meets the criteria and how much to reduce its fee.

The Commonwealth also provides building and equipment funding for childcare services, usually in partnership with the state or territory government. It pays operational subsidies to all approved community-managed services, which can be used for salaries and other ongoing costs.

In addition, the Commonwealth supplies **Supplementary Services** (SUPS) assistance and special services to give children with special needs better access to childcare and to help services provide more appropriate care for these children. The priority groups for SUPS are children from non-English speaking backgrounds, children with disabilities and Aboriginal and Torres Strait Islander children. Support may be in the form of a grant or can include resources, equipment, training, minor modifications to premises, transport and hands-on help.



Who cares about childcare?

The regulation of childcare services in Australia is split among Commonwealth, state/territory and local governments. This shared responsibility results in the system being fragmented and confusing for parents.

THE FOCUS of the Commonwealth Government's involvement in childcare is the national Children's Services Program. The main objective of this program is to help families with dependent children to participate in the workforce and in the general community by making childcare affordable for low and middle-income families and helping to improve the supply and quality of childcare. The federal legislation currently covering funding for childcare is the Child Care Act 1972. It only covers funding for long-daycare centres. Other types of childcare are covered by federal funding conditions imposed through administrative guidelines and bulky handbooks.

The Commonwealth Government has relied heavily on state government childcare licensing laws to ensure that services maintain appropriate standards. These laws are mainly concerned with the physical environment in which care is provided. They regulate such things as the standard of the premises, staff/child ratios and the suitability of the operator. State and territory licensing requirements are not uniform. For example, family day carers are speci-

cally regulated in some states but not at all in others. In some states, authorities consider whether prospective employees of a service are fit and proper before granting a licence. In others, they are concerned only with the educational qualifications and suitability of the owner or manager of the centre. Parents should check with their own state government to ensure they know how the schemes they're interested in are regulated.

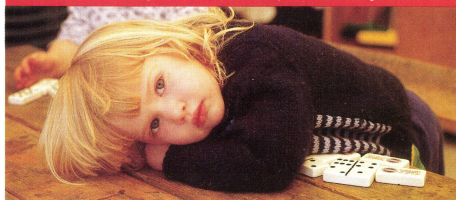
State and territory governments usually contribute, in partnership with the

Commonwealth, half the capital that goes into creating a new service. They also contribute towards the staffing or recurrent costs of community-managed long-daycare centres, occasional-care centres and out-of-school-hours care. Most state and territory governments also fund children's services which fall outside Commonwealth funding programs, like pre-schools, school-age programs and occasional care.

Local governments also have a substantial role to play in the provision of childcare. Very often local councils contribute the land on which new childcare centres are built. Many also take responsibility for building new services and getting them up and running. They often provide other resources and may also take part in the planning process and the co-ordination of carers, in particular for family daycare.

Lastly, parents and community organisations give support and management and other expertise to staff, and participate actively in fund-raising for services. □

Next month: 'Quality care' — what is it, and how do you find it?



WHAT YOU NEED

If you have any choice of childcare at all, before you can begin to look objectively at the different types available and choose the most appropriate, you need to consider your own, your child's and your family's requirements. Use the following checklist to start identifying those requirements.

- What age is the child who will be requiring care? _____
- What kind of care situation would best suit the personality of your child? ☐ Home setting ☐ Group care/centre-based setting
- Does your child have any special needs that must be considered? _____
- What are your work or other commitments? _____
- What hours do you require the service to be open?
Days: _____ Hours: _____
- How many weeks a year will you be requiring childcare? _____
- What mode of transport will you use? _____
- Would you prefer the service to be near: ☐ Home ☐ Work
- How will childcare affect any other family members? _____
- How involved do you want to be in the centre/scheme's management? _____

Once you have established exactly what your needs are, it is much easier to evaluate the options and make the best choice.

THE MAGIC LANTERN

A lamp which collects and stores the sun's energy through the day to provide you with light during the night: it sounds like a good idea, but is it effective? We take a look at a new portable solar-powered lantern and shed light on its advantages and drawbacks.

THE SUN has long been viewed as a source of limitless, clean and free energy, but to date solar power has had a limited impact on day-to-day energy use. Solar water heaters have carved an admirable niche in their marketplace, but a more general use of solar energy is still some way off.

Some people argue just about all the energy we commonly use comes from the sun. Even the fossil fuels we burn had the sun as their original energy source millions of years ago. Today the challenge is to harness the sun's energy in a more immediate way.

One innovation that's recently found its way onto the marketplace is a solar-powered portable lantern, called the MAGIC LANTERN, which can be used in situations where mains-powered lighting isn't available, such as camping or in a garage.

HOW DOES IT WORK?

The lantern comes with a separate solar panel measuring approximately 30 by 60 cm (though the manufacturers say they're looking at supplying a smaller panel on future models). The panel contains an array of solar cells which, when exposed to light, produce electricity. In-

side the lantern is a sealed lead-acid battery, similar to a car battery but smaller. When the solar panel is plugged into the lantern and left out in the sun, it will charge the battery. In use, the lantern is disconnected from the solar panel and the battery provides power for a small 7.5 watt fluorescent tube (approximately equivalent to a 40 W incandescent bulb).

USING THE LANTERN

The carry handle doubles as a hanging point, or the lantern can be used free-standing on its flat base. It's quite heavy, weighing in at almost 4 kg, and the handle is fairly thin, so it can be uncomfortable if you need to carry it for any length of time.

A single control on the front panel is used to select one of two brightness settings or to switch the lamp off. There's also an indicator light on the front panel which, when the solar panel is connected, lets you know when the battery is fully charged.

The battery charging process is automatic. With the solar panel plugged in and a generous dollop of sunshine, the battery will be charged. The lamp is claimed to have built-in circuitry to protect it from overcharging and to stop the

battery from being damaged by draining too much charge.

■**Tip:** Dust and dirt on the surface of the solar panel will lower its efficiency. For peak performance, clean the solar panel regularly. The instructions recommend dusting regularly with a soft brush or cloth.

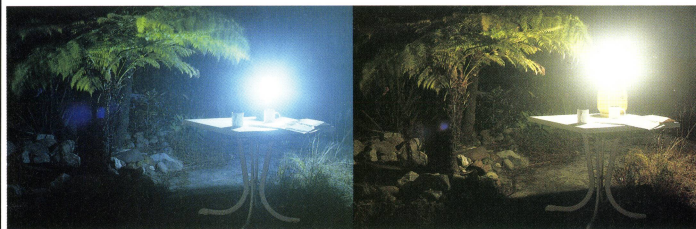
THE BRIGHT SIDE

So how bright is the MAGIC LANTERN? The lamp has two brightness settings. Even on its higher setting, the lantern is nowhere near as bright as most normal house lights, but our tester found it adequate for reading and writing. On the low setting, the lamp was still reasonably bright and would be useful camping, where it could be used to light the inside of a tent.

The pictures below show the brightness of the MAGIC LANTERN on its high setting compared to a gas camping lamp.

CHARGING AND RUNNING TIMES

The length of time it takes to charge the battery depends on how much light the solar panel gets. The manufacturer claims four hours' exposure to direct sunlight will be enough to give four hours' lighting on the high setting or eight hours on low.



The Magic Lantern (left) on its high setting, compared to the light from a gas camping lamp: gas lamps give a little more light. (The difference in colour is due to the difference between fluorescent and incandescent light as picked up by the photographic film; in reality the light from the Magic Lantern does not look blue-green.)

We tested the lamp by leaving it charging outside for a whole day and measuring how long the light lasted at night. We repeated this over several days to see how the weather affected charging. From a single day's charging in partly cloudy weather, the light shone for almost five hours on its high setting and close to 13 hours on low. The worst result was after a cloudy day, when we only had an hour's worth of light on high.

We also left the lamp out until it was fully charged to find the maximum capacity of the battery. We were then able to run it on high for slightly under 12 hours before being left in the dark.

These tests were carried out in late May and June when the days are quite short. In midsummer you could expect quite a bit more lighting time from a single day's charging than we were able to achieve.

LAMP LIFE

The MAGIC LANTERN requires little in the way of upkeep. Apart from cleaning, the only other periodic maintenance the lamp would need is occasional replacement of the bulb and battery. The bulb is a commonly available miniature fluorescent tube and requires no tools to change, but does require you to disman-

tle a fair portion of the lamp and could be a little awkward for some people. The battery is a small 12 volt sealed lead-acid unit and its replacement requires a bit of screwdriver work on the base of the lantern, which is fiddly but not particularly difficult to do. Fortunately, you shouldn't need to replace the battery too often.

The following are the manufacturer's claimed lifespans for the various components under normal operating conditions:

- Battery — three to five years.
- Fluorescent tube — $2\frac{1}{2}$ to seven years, depending on usage.
- Solar panel — 10 to 20 years.

THE ALTERNATIVES

How does the MAGIC LANTERN compare to other popular forms of portable lighting for camping, such as bottled gas or kerosene lamps? These can put out more light than the MAGIC LANTERN but have several drawbacks when it comes to the great outdoors. The first is the need to refuel them. Running out of fuel when you're miles from civilisation can be a real pain in the camping ground. You can carry extra gas bottles or kerosene, but this can be awkward and even dangerous if the bottles aren't stored properly.

Both gas and kerosene lamps work by combustion, so they shouldn't be used in an enclosed space such as a tent, though many people do. The combustion process burns oxygen and releases some less desirable substances including carbon dioxide, so the lamp needs to be in a well ventilated area. There's also the danger of fire if it's knocked over and, because some surfaces of these lamps can get quite hot, the chance of burning yourself.

Battery-powered fluorescent lamps are another alternative. They have a similar light output to the MAGIC LANTERN and can be used in similar situations, but don't have the solar recharging capability. They can be run on rechargeable NiCad batteries to save having to replace dry cell batteries, but you would need access to a power outlet to recharge them.

HELPING THE ENVIRONMENT

One major advantage with the MAGIC LANTERN is its friendliness to the environment. Combustion lighting such as gas or kerosene lamps releases by-products. Bottled gas is fairly clean when burnt but does produce carbon dioxide, a greenhouse gas. Burning kerosene also produces carbon dioxide, as well as releasing benzene compounds which can be harmful to humans.

SOLAR GARDEN LAMPS

WHILE THE Magic Lantern is designed as a portable light source, solar power is also being harnessed to lead people up their garden paths. Solar garden lights have recently been appearing in home improvement catalogues but, unlike the MAGIC LANTERN, these lamps may have more drawbacks than advantages. We bought two different garden lamps advertised in the *Innovations* catalogue to find out how useful this type of product is. The models we looked at are the VENES Supernova SOL700, which uses a small incandescent bulb similar to a torch bulb, and the SOLITE SW-124C, which has a small fluorescent tube.

Solar garden lamps work in a similar way to the MAGIC LANTERN in that they have a solar panel recharging a small lead-acid battery which supplies power during the night. The difference is the garden lamps are self-contained, with the solar panel built into the casing and are designed to be mounted on a spike which is pushed into the ground so they can be placed around a garden or along a path. Both lamps tested have a built-in sensor which can be set to turn the light on automatically when it gets dark, and both come with a plastic spike for garden mounting, though you could also put the SOLITE on an outside wall.

We tested the garden lamps in a similar way to the MAGIC LANTERN, by leaving them outside for a day's charging and then measuring how long they shone for at night. On a partly cloudy



Venes Supernova SOL700

Solite SW-124C

The MAGIC LANTERN, on the other hand, doesn't produce anything but light when it's used and doesn't consume mains electricity when charging. The battery, however, does contain heavy metals and should be disposed of properly at the end of its life. Many car battery suppliers and recycling depots take defunct lead-acid batteries, so check in your local area.

IS IT REALLY MAGIC?

While we found no evidence of arcane arts operating within the MAGIC LANTERN, it's an interesting alternative to more traditional camping lamps. It provides enough light to be useful in most

camping situations and saves the would-be adventurer from the need to carry extra fuel or return to civilisation to get the gas bottle recharged. Of course, if the sun doesn't shine you could find yourself running out of light before bedtime.

The purchase price of close to \$300 may deter some buyers, but minimal running costs and low maintenance, combined with convenience and environmental advantages, make the MAGIC LANTERN worth a serious look.

A word of caution, though: by its very nature the solar panel must be left outside during the day to bask in the sunshine, making the lamp conspicuous to would-be camping ground thieves. The high price may make the lamp an attractive target. □

MAGIC LANTERN

Price: \$295

Manufacturer: Neste Advanced Power Systems

Warranty: 12 months for lantern, five years for solar panel

Lamp dimensions: 200 mm diameter, 400 mm high

Lamp weight: 3.9 kg

Solar panel dimensions: 310 x 610 x 20 mm

Solar panel weight: 3 kg

If you have trouble finding the Magic Lantern, ring the distributor, WD Moore & Co, toll-free on 008 804 914 for information on your closest supplier.

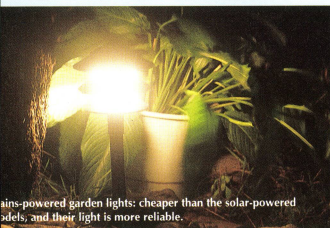


THE ALTERNATIVES

one day, the SOLITE managed to store enough charge to shine for most four hours and the VENES, in similar conditions, gave just over three hours of light. Following a mostly cloudy day, the lights only shone for between one and two hours.

One of the main uses of this type of light would be to provide illumination along a garden path for when you arrive home on a dark night. In winter, when darkness can set in quite early, these lamps may run out of charge before you get home.

To get the most out of the garden lamps, they would need to be situated so they received as much sun as possible during the day. In a leafy, tree-lined garden it may be quite difficult to position the lamps this way, giving you even less night-time illumination.



Solar-powered garden lights: cheaper than the solar-powered models, and their light is more reliable.

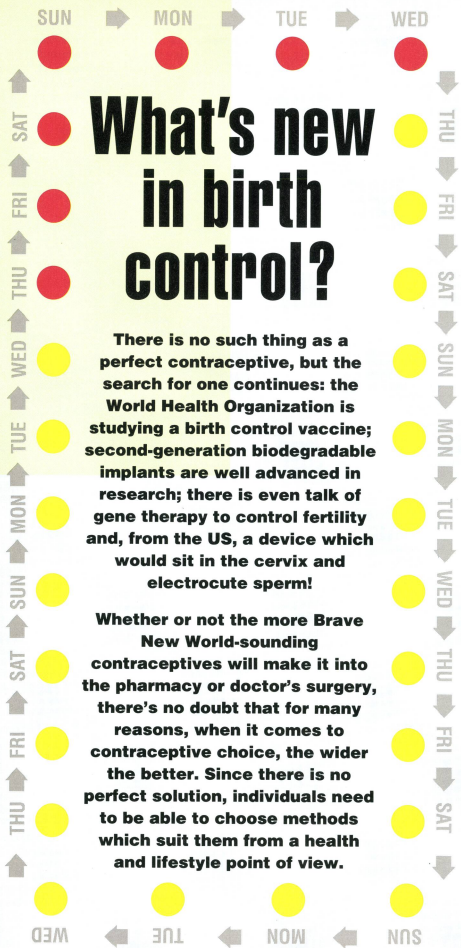
The main alternative for garden lighting is a set of low-voltage lamps that run from a transformer. The transformer plugs into a wall socket and converts the mains voltage into a low voltage suitable for running the lamps. Their main disadvantage is that you need to run a cable to supply the lamps with power. This would normally be buried in a shallow trench along the garden or path and the lamps connected at the desired places. Because they're low-voltage, you don't need to have an electrician to wire them up and there's no danger of electrocution if you accidentally chop through the wire with a spade while you're gardening.

The power used by these lamps would be very small: running four low-voltage garden lamps would probably use less power than a single household light bulb.

According to our market research, you should be able to pick up a set of four low-voltage garden lamps for around \$60 to \$70 complete with transformer and wiring. In comparison, solar garden lamps are very expensive: the SOLITE retails for \$129 and the VENES for \$89 for a single lamp.

CONCLUSIONS

Solar garden lamps have certain advantages, such as not needing to be wired up to an electricity supply, but their high cost, limited light duration and need to be placed in a sunny position make them unsuitable for many uses. A solar garden lamp may be a good option in a sunny garden where it's not practical to run a cable, but in general, the low-voltage mains-powered models would be a better solution for most garden lighting needs.



What's new in birth control?

There is no such thing as a perfect contraceptive, but the search for one continues: the World Health Organization is studying a birth control vaccine; second-generation biodegradable implants are well advanced in research; there is even talk of gene therapy to control fertility and, from the US, a device which would sit in the cervix and electrocute sperm!

Whether or not the more Brave New World-sounding contraceptives will make it into the pharmacy or doctor's surgery, there's no doubt that for many reasons, when it comes to contraceptive choice, the wider the better. Since there is no perfect solution, individuals need to be able to choose methods which suit them from a health and lifestyle point of view.

Wider choice is better choice

The hormonal oral contraceptive — usually referred to as simply 'the pill' — is credited with causing a social revolution when it was made widely available in the 1960s. It has gained enormous popularity: in one Australia-wide study, 72% of women surveyed in the 20 to 59 age group had used the pill at some time in their life and around half of those surveyed in the 20 to 29 age group were using it at the time of the survey. But it is not the best option for all women. Some don't like the thought of taking hormones long-term, some find it inconvenient to remember to take a pill every day, some are advised not to take it for medical reasons.

Similarly, an IUD may be a good choice for a woman in a stable relationship who doesn't suffer heavy periods, but a bad choice for a young woman who's frequently changing partners and who may be at increased risk of catching sexually transmitted diseases (STDs). With more options, it's more likely a woman or a couple will keep trying with contraceptives: if one doesn't suit, they can move on and try another.

Despite this need, family planning experts say contraceptive choices are being reduced in many parts of the world, particularly in some western countries. They point to lack of funds, fear of litigation and the cost of marketing as some reasons why drug companies are slow to introduce new options. Australia falls behind some other western countries in choice as a result: "Women are missing out on a range of contraceptives because of the expense and lengthy process related to introducing new drugs, a vocal minority and, in some instances, medico-legal issues," says Dr Anna Lavelle, executive director of Family Planning (FP) Victoria.

Edith Weisberg, medical director of Family Planning NSW, says Australia's small population means there is little financial incentive for the pharmaceutical companies to market new contraceptives that are less popular than the pill or condoms. "Drug firms tend to concentrate on the more lucrative markets of Europe and North America first," she says.

What are we missing out on? Which contraceptives are available elsewhere, but not yet in Australia?

What you can't get here

■ **Norplant**, an implant of six matchstick-size capsules (see photo), is available in the US and the UK and is estimated to have two million users worldwide, with approval in 29 countries by 1993. The capsules release a stream of the hormone levonorgestrel over five years. The quantity of hormone is high initially but settles down to a constant level after the first 12 months. The implants are inserted under the skin in the inside of the upper arm and removed at the end of their lifetime or sooner if desired. They provide instant contraception when inserted on day one of menstruation. Both insertion and removal are by a health professional.

Norplant is suitable for women who for medical reasons cannot use a pill containing oestrogen. There is no evidence that amenorrhoea (abnormal absence of menstrual bleeding) or loss of fertility have been experienced by women who have used Norplant long-term.

Norplant's main drawback is its tendency to cause irregular bleeding, although this decreases with use and may not be so much of a concern to a woman who has been warned it can occur. The Sydney Centre for Reproductive Health Research is involved in a study with the Population Council of New York to investigate the cause of this.

Will Norplant ever be available in Australia? It was developed by the Population Council of New York and is manufactured by a small drug company called Leiras, from Finland. However, Wyeth Australia has successfully applied to be the product's sponsor in Australia. Wyeth intends to register the product with Australian drug authorities and is currently gathering all the information needed for a submission to the Commonwealth Department of Human Serv-

Norplant, left, and a female condom. Will they be available here soon?



ices and Health. The evaluation process can then take over a year.

There are no guarantees the Department of Human Services and Health will give approval. However, Australian women have it in their favour that Norplant is an accepted contraceptive in many other countries and has been used successfully by many women.

■ **A female condom** called the Femidom was released in the US last year. It consists of a lubricated polyurethane sheath which lines the vagina and has a flexible ring at each end (see photo). Polyurethane is stronger than the latex used in male condoms, so less likely to break or tear. The ring at the closed end of the condom sits around the cervix (entrance or neck of the womb) at the top of the vagina, while the other sits externally on the labia (the folds of skin that surround the entrance to the vagina). The female condom is effective as a contraceptive and gives some protection against STDs, although the US Food and Drug Admini-

stration in September 1993 warned that "for highly effective protection [against STDs], male latex condoms must be used". It has been welcomed by some women, who see it as a barrier method under their control.

The female condom has been approved for marketing in Australia, but at the time of writing we could only find it at Family Planning NSW.

■ **The vaginal ring** is a soft, doughnut-shaped plastic ring impregnated with hormones, which it releases when left in the vagina (see photo overleaf). Depending on the hormones used, different versions can be left in for three months before replacing, or inserted for three weeks, removed for one during which bleeding would occur, then reinserted. One version releases low doses of ethinyl oestradiol, an oestrogen, and norethisterone acetate, a progestogen. A recent study into its acceptability found some women preferred a vaginal ring to the pill because they found it easier to use than remembering to take a pill each day. There are no plans to release this product in Australia in the near future.

■ **New IUDs** not yet available in Australia include the levonorgestrel-releasing **Lng-IUD**, **Levonova**, a T-shaped device with a life of five years (see photo overleaf). Its main attraction is that users experience shorter, lighter and less painful periods. It has also been shown to have a protective effect against pelvic inflammatory disease because it thickens cervical mucus. Disadvantages include spotting in the first few months of use.

The Sydney Centre for Reproductive Health Research is currently conducting clinical studies of the Lng-IUD but these are not related to marketing the product locally. It was developed by the same

TADPOLES AND LEMONS: A POTTED HISTORY OF CONTRACEPTION

Contraception today may be more varied and more reliable but it's certainly not new. Tomb paintings show Ancient Egyptians wearing coloured cloth condoms; Charles II was advised to use sheaths of either oiled linen or sheep's intestine; Casanova reputedly recommended his lovers use half a lemon as a vaginal barrier contraceptive.

The cervical cap dates back to 1838 to a German gynaecologist who saw potential for a custom-made wax cap fitting the cervix. The first IUDs — intra-uterine devices — looked like old-fashioned collar studs and sat at the entrance to the womb rather than inside. Developed in 1868, they were first used to treat a prolapsed womb. Forty years later an IUD was developed made of silkworm gut; another 20 years later it was covered in German Silver — an alloy of copper, nickel and zinc.

Douches — washing of the vagina — are a part of contraceptive folklore, and despite being proved ineffective and even harmful in some cases, they are still used today as a form of contraception. *Contraception: The Facts* by Peter Bromwich and Tony Parsons refers to douching with Coca Cola in some Third World countries!

Perhaps the first mention of oral contraceptives is the advice in an ancient Chinese text to swallow 24 live tadpoles — if swallowed in spring, a woman could enjoy five years of pregnancy-free life. More modern — and more effective — oral contraceptives owe their origins to an extract of the roots of the wild Mexican yam. This, it was found, could be transformed into the basic ingredient for steroid hormones.

company responsible for manufacturing Norplant — Leiras. Because Leiras is a small company, the costs of seeking approval to market the Lng-IUD in Australia are prohibitive, particularly when our population is so small. Its introduction would only be likely if a larger drug company showed interest in acting as a sponsor.

■ There are also versions of the pill, injectables and vaginal sponges impregnated with spermicides which are not available in Australia.

What's new here?

Although this is a substantial list of contraceptives not yet available in Australia, there have been two recent additions to the Australian contraceptive portfolio.

■ **Marvelon** (see photo opposite) is a new type of combined pill which contains a 'new-generation' progestogen with a slightly different chemical structure, which means it behaves differently in the woman's body. For instance, it has been found to have minimal impact on changing women's cholesterol components, which leaves the medical experts believing that in the long term it is better for women's health. However, this must be said in the context that there is no conclusive evidence that earlier progestogens, which did cause measurable changes to the ratios of women's cholesterol components, actually caused heart disease. Marvelon is also less likely than other progestogens to cause acne and weight changes.

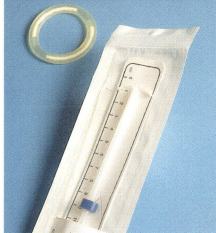
■ **Depo-Provera** (see photo opposite) is an injectable contraceptive that, although previously available, had investigational status for many years before being officially approved (see page 26 for more information).

After the night before

The option of a 'morning-after' pill has been part of normal medical practice for about two decades. Family planning authorities' advice now is to use one method to stop infection (HIV, other STDs) plus one to stop conception. However, when contraception fails or sex has taken place without it, women may turn to the morning-after pill to avoid pregnancy.

The choice is either an IUD fitted within five days of unprotected sex or a special dose of oral contraceptives taken within a specified time period after sex.

The vaginal ring (left) and the new IUD, Lng-IUD Levonova. There are no plans for these to be available in Australia.



The first method is rarely used in Australia, probably because of a fall in popularity of the IUD for contraceptive purposes. Although the time margin is more generous, it does require finding a doctor who's skilled in fitting one.

The morning-after pill is not in fact one pill, but usually several taken at specified times and consisting of specific doses of oestrogen and progestogen, prescribed by a doctor. The course can be taken for up to 72 hours after having unprotected sex, so 'morning after' is a bit of a misnomer — a more apt name would be the 'emergency pill'. It has been known to cause quite severe nausea in some women.

FP NSW recently conducted a survey among 200 GPs on attitudes to the morning-after pill. "We found a number will not prescribe it on moral or religious grounds, and others will only give it if asked for it," says Edith Weisberg. She is among those calling for these pills to be especially packaged for morning-after use. Currently doctors have to chop up a packet of a month's supply of pills, whereas in other countries such as the UK, special packs of four pills are available. In the UK there is even a move towards having the morning-after pill available over-the-counter.

Another potential morning-after option is the controversial pill RU 486. This product has been labelled the 'abortion pill' because, when used in conjunction with another drug (a prostaglandin), it can cause a miscarriage or abortion. There have recently been two separate clinical trials of RU 486 conducted by Australian researchers. One Melbourne study, run by FP Victoria, involved using it in conjunction with an

oral prostaglandin to cause an early abortion. This trial has been temporarily halted following pressure from vocal lobby groups, whose arguments included the claim that participants had not given fully informed consent.

Medical experts told us there is no evidence to suggest that RU486 has any detrimental effects and that its use can be as safe as a surgical abortion. There has been one reported death of a woman in France following use of RU-486 to effect an abortion, but according to the medical experts we spoke to, her death is linked to the type of prostaglandin used rather than to RU 486 itself. (A different form of prostaglandin was being used in the Melbourne trial.)

The second Australian trial, being run by both FP NSW and FP Victoria, is part of a 14-centre World Health Organization trial of RU 486, used on its own as a morning-after contraceptive. This is a trial to explore how well lower doses work. As a morning-after pill, RU 486's advantages are that it can be used up to five days after unprotected intercourse, and it's been shown to cause less nausea. At this stage, Roussel, the company which manufactures this drug, has no intention of marketing it in Australia.

No prescription?

Amid the search for new contraceptives, doctors worldwide are debating whether the pill should be made available without a prescription: "It would be fine," says Professor Gabor Kovacs, Professor of Obstetrics and Gynaecology at Monash University, Victoria. "Cigarettes should be on prescription only, they're much more dangerous." However, there's no sign that oral contraceptives will ever be available over the counter like this.

Points to consider when choosing a contraceptive include:

■ Extra protection against STDs offered by barrier methods. People who change partners frequently are encouraged to use condoms for this reason, but following the release of statistics from the FPA are also being encouraged to use additional methods for contraception.

■ Whether you want a locally acting or a systemic (whole body) method.

■ No method — not even the pill — is a 100% guarantee against pregnancy. And for maximum effect, contraceptives must be used as directed — missing pills reduces their effect; not putting on a condom early enough increases the risk of pregnancy as the pre-ejaculate contains sperm.

Your contraceptive choices today

We've told you what isn't available in Australia for various reasons — the next three pages outline what you can get here.

The pill

■ What is it?

The combined pill, otherwise known as 'the pill', contains synthetic versions of the hormones oestrogen and progesterone.

■ How it works

Alters the complex interplay of hormones which control the female reproductive cycle. This has the effect of:

- preventing ovulation
- making the womb (uterus) lining less hospitable to a fertilised egg
- thickening the cervical mucus, increasing the obstacles to sperm.

■ Good points

Very low failure rate — see below. Reduces the chance of serious pelvic infection, endometriosis, cancer of the ovary, cancer of the lining of the womb, anaemia, benign breast lumps and ovarian cysts. May also relieve painful periods, making bleeding lighter and more regular. May help clear acne although early progestogens (synthetic progesterone) were found to cause it.

■ Bad points

Not suitable for women with a history of, or a likelihood of developing, serious circulatory disease — for instance, smokers, those with high blood pressure or who've had a heart attack. Although extremely rare, the increased risk of thrombosis — blood clotting — is serious. Less serious side-effects can include fluid retention and headaches, although many women suffer no ill effects.

■ Reliability/failure rate

Very low failure rate, although problems can occur with what doctors call 'complacency', or what we'd simply call forgetting to take the pill. If you forget to take it for less than 12 hours there is probably no risk of pregnancy, provided you take it as soon as you remember, then take the next one at the regular time. If you forget for longer than 12 hours, take the pill you missed plus the next one and avoid having sex for the next seven days or use condoms or a diaphragm as well as continuing to take the remaining pills in the pack. Read the instructions with the pills to check when to start the next pack.



Clockwise from top left: Depo-Provera, which is injected; a set of morning-after pills (and the anti-nausea tablets often prescribed with them); the new pill Marvelon; one type of combined pill; and one type of mini-pill.

Taking broad-spectrum antibiotics or vomiting or diarrhoea soon after taking a pill can reduce efficacy. You also need an additional form of contraception for the first seven days after you start taking your first packet.

The mini-pill

■ What is it?

A low-dose pill containing the synthetic hormone progesterone — hence its other and more accurate name, progestogen-only pill (POP).

■ How it works

Progesterone breaks down in the body to substances which act like the hormone progesterone. Its main effects are:

- thickening of the cervical mucus
- making the womb lining less hospitable to a fertilised egg.

■ Good points

High success rate — see below. It is suitable for most women and a good alternative for those unable to take the combined pill, including:

- smokers
- women at risk of thrombosis (blood clotting)
- those with high blood pressure
- breastfeeding mothers.

■ Bad points

Timing is more critical than for the combined pill — additional methods of

contraception must be used for the next few days if a pill is more than three hours late. It may not be suitable for women who already have heavy, frequent and irregular periods — as the mini-pill is likely to make these worse — or those who've had an ectopic (outside the womb) pregnancy.

■ Reliability/failure rate

High success rate although slightly lower than the combined pill.

The morning-after pill

■ What is it?

Also referred to as the post-coital or emergency pill, it is in fact usually several pills making up a specific dose of oestrogen and progesterone. If taken within 72 hours of unprotected sex, is claimed to prevent pregnancy. It is usually taken as two lots of two pills exactly 12 hours apart.

■ How it works

Prevents pregnancy in one of two ways:

- delays ovulation until any sperm inside the body have died, so conception can't occur.
- prevents a fertilised egg from implanting in the womb, so pregnancy can't advance.

■ Good points

A good back-up for failed contraception such as condom breakage. Should elimi-

Clockwise from the top: the old faithful condom; a modern IUD; cap; diaphragm; spermicide, which is recommended to be used with all barrier methods.



nate the need for surgical abortion later in a pregnancy.

■ **Bad points**

Side-effects include nausea in about half the women who take it (as our photo on the previous page shows, anti-nausea pills are often prescribed at the same time, plus an extra two pills in case of vomiting). Breast tenderness, headaches and light bleeding may be transitory discomforts.

■ **Reliability/failure rate**

The morning-after pill is very effective if taken quickly enough. It will not work if the gap between intercourse and using the pill has been too long and it will not bring about an abortion if a fertilised egg has been successfully implanted in the uterus.

Depo-Provera

■ **What is it?**

A long-acting synthetic hormone similar to progesterone. It is given by injection, each one lasting three months.

■ **How it works**

Its main action is to stop ovulation. In addition it:

- thickens mucus at entrance of the womb, making it difficult for sperm to enter
- changes the lining of the womb so it's less able to support a fertilised egg.

■ **Good points**

Low failure rate — see below. Once given, you don't need to remember to take a pill every day. Many women find periods stop after two or three injections, which some find convenient. Women who have used it have not experienced long-term loss of menstruation or infertility. It does not affect blood clotting so is an option for women with a history of thrombosis.

■ **Bad points**

Tends to disrupt the menstrual cycle, bringing irregular bleeding or spotting, and sometimes, at the beginning, heavy bleeding. Some women are disturbed by a lack of periods after two or three injections. It is not instantly, or even quickly, reversible. Other potential side-effects include weight gain or loss and headaches.

■ **Reliability/failure rate**

More effective protection than the pill and, as well, there's no risk of forgetting to take it.

IUD

■ **What is it?**

Intra-uterine devices — IUDs — come in various shapes and sizes and sit inside the womb for a lifetime of up to eight years. Some release hormones or copper, which enhance their contraceptive power. They are fitted folded flat in a tube called an introducer.

■ **How it works**

- reducing the possibility of sperm entering the womb and meeting an egg.
- making the womb lining inhospitable to implantation of a fertilised egg.

■ **Good points**

Acts locally. Once fitted, newer ones have lifetimes of up to eight years. Newer ones like the Lng-IUD, Levonova, are also designed so there's less risk of infection.

■ **Bad points**

Not suitable for people likely to be exposed to sexually transmitted diseases. There is increased risk of infection following insertion, and a minor risk of perforation of the womb (0.8 per 1000 insertions), depending on the skill of the inserter; however, there's no risk of per-

manent damage to the womb. Some women find it makes periods heavier; some may experience an increase in cramping after insertion and an increase in period pain, if this was present prior to IUD use. In this case an IUD may not be the best contraceptive choice.

■ **Reliability/failure rate**

The overall failure rate is around two for every 100 women each year.

Barrier methods

■ **What are they?**

Condom: A sheath which covers the penis during intercourse, usually made of latex and used once before disposal.

Cap: A thimble-like rubber cap which sits snugly over the cervix (entrance to the womb).

Diaphragm: A flexible rubber dome with a rigid rim which covers the cervix.

■ **How they work**

They act as a physical barrier to sperm. They may be used in conjunction with spermicides for increased protection.

■ **Good points**

Act locally, with minimal side-effects. Latex condoms help protect against sexually transmitted diseases, including HIV/AIDS. All can be inserted/put on just before sex.

■ **Bad points**

Condom: Allergic reaction or irritation is a rare side-effect.

Diaphragm: Allergic reaction or irritation is a rare side-effect; some reports of increased risk of bladder infection.

Caps and diaphragms must initially be fitted by a health specialist. With all three methods, some couples complain of reduced spontaneity.

■ **Reliability/failure rate**

Condom: Good condoms may have a failure rate as low as two per 100 users each year. Generally the failure rate is much higher, possibly due to the poor quality of some condoms. Those advertised as having a spermicidal lubricant offer slightly better protection, but not as high as a condom combined with a separate spermicide.

Diaphragm: Used in conjunction with a spermicide, it can have a failure rate as low as four per 100 users each year, but like the condom, the failure rate is generally much higher because the diaphragm deteriorates over time. Inspect your diaphragm regularly by holding it up to a strong light to look for thin patches, holes or cracks. A good one will last about a year.

Cap: There are no statistics available about its success/failure rate when

used alone, but when used in combination with a spermicide, its performance is similar to that of a diaphragm.

Spermicide

■ What is it?

Comes in many forms: foams, jellies, gels and suppositories, which are inserted into the vagina not more than an hour before intercourse.

■ How it works

The active ingredient kills sperm in several ways, including preventing them taking in oxygen and disturbing the surface tension forces holding their outer skin together. The base (foam, gel, etc) helps the spermicide spread around the neck of the womb.

■ Good points

Gives extra protection to barrier methods.

■ Bad points

Not usually considered sufficient on its own. May cause irritation to either partner.

Reliability/failure rate

They have a high failure rate when used by themselves but are a very effective method when used in conjunction with condoms, a diaphragm or a cap.

Natural methods

■ What are they?

A range of methods may be used to prevent pregnancy without resorting to devices or drugs, such as withdrawal or coitus interruptus, the calendar or rhythm method, the temperature method and the cervical mucus or Billings method.

■ How they work

With coitus interruptus or withdrawal, the penis is withdrawn from the vagina before ejaculation. All other methods are

based on the supposition that if you can determine when an egg is released from its follicle and avoid having sex around that time, you can avoid pregnancy. The rhythm or calendar method involves calculating, based on when your eggs are most likely to be released, the number of 'unsafe' days during each menstrual cycle and avoiding sex on those days. The temperature method, used in conjunction with the calendar method, involves tracking the rise in your body temperature which coincides with ovulation, and, again, avoiding sex until the point in your cycle when you think you're no longer fertile. The Billings method involves tracking ovulation by observing the changes in vaginal mucus.

■ Good points

No side-effects, encourages good communication between partners.

■ Bad points

Requires commitment to be successful. For instance, using the rhythm and temperature methods combined involves the woman taking her temperature every day. Also requires periods of abstinence.

■ Reliability/failure rate

Coitus interruptus is a moderately reliable method, with most failures resulting from the man not withdrawing his penis quickly enough — pre-ejaculate fluid already contains sperm. The success of the other methods, which involve keeping track of the woman's menstrual cycle, varies greatly, with the additional problem that they involve long periods of abstinence. They are less reliable for women with irregular menstrual cycles. The calendar method, used on its own, is the least reliable. Using a combination of methods

is the safest strategy. A combination of the Billings and temperature methods, for instance, gives a pregnancy rate of around 15 per 100 women each year.

Permanent contraception: sterilisation

■ For the man

Male sterilisation is called vasectomy. It is a simple operation in which each of the two tubes through which the sperm travel — the vas deferens — is blocked, usually by being tied and then cut, so the sperm are unable to reach the exit through the penis. Sperm go on being produced and travel along the tubes as far as they can, then eventually dissolve and are absorbed into the body. The operation doesn't affect production of seminal fluid; the sole difference is that the seminal fluid won't have sperm in it.

It takes some time to get rid of the sperm that are already past the blockage in the tubes, so use of another method of contraception is recommended until there have been two zero sperm counts. After that the risk of causing pregnancy is virtually nil.

■ For the woman

Sterilisation is done by blocking the Fallopian tubes (tubal ligation — 'having your tubes tied') that carry the eggs from the ovaries to the womb so that eggs can't be fertilised by sperm. The ovaries aren't affected so the normal menstrual cycle continues and an egg is produced. When it's released, it simply travels down the tube as far as it can, then dies and gradually dissolves.

It's a very reliable form of contraception: the failure rate is around one in 500.

THE MALE PILL: SPACE-AGE DREAM OR SCIENTIFIC POSSIBILITY?

The female contraceptive pill has enjoyed enormous popularity for its convenience and effectiveness — what about the male equivalent? Although it sounds attractive, "Men's physiology is stacked against it," according to Dr Anna Lavelle, executive director of Family Planning Victoria.

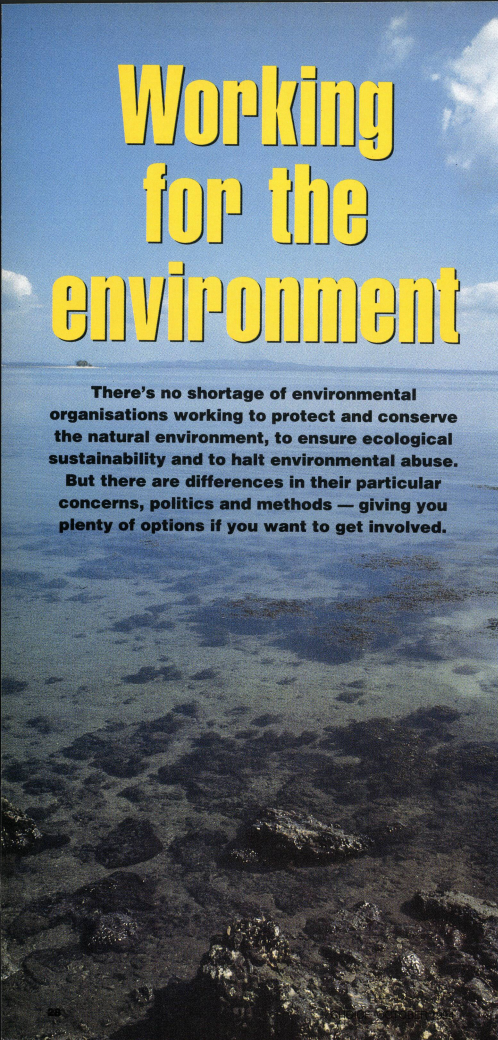
Female hormonal contraceptives tend to work in a number of ways — preventing ovulation and making the system inhospitable to sperm and preventing an embryo implanting in the womb, for example. There are not so many avenues available for men — they are generally limited to interfering with either sperm production or sperm delivery.

Hormones can reduce sperm count, making men less fertile, but they can't easily reduce it to zero, especially not for every male using them. Dr Edith Weisberg, medical director of Family Planning NSW, explains, "The World Health Organization conducted a study with weekly injections of testosterone over three months. Sixty per cent of men had zero sperm counts, but 40% had some sperm."

Still, there are numerous substances under trial, or at least discussion, including gossypol, a contaminant of cottonseed oil, which reduces the number of sperm produced. It has two major drawbacks. First, some men find their fertility does not return to normal on stopping gossypol. Second, for some men, gossypol's tendency to reduce potassium levels in the blood makes them weak and unable to work. In extreme circumstances they are bedridden and presumably not in a state to have to worry about contraception.

The hormone Gn-RH has possibilities for both men and women and has been tested as a component of a nasal spray. In men it inhibits the production of sperm, but may also reduce sex drive after a few weeks of use.

Other ideas include: an extract from the vine *Tripterygium wilfordii*, also known as Thunder God Vine, which is being tested in China; inhibin, a hormone which stops the production of sperm; and vaccines against sperm.



Working for the environment

There's no shortage of environmental organisations working to protect and conserve the natural environment, to ensure ecological sustainability and to halt environmental abuse.

But there are differences in their particular concerns, politics and methods — giving you plenty of options if you want to get involved.

IF IT WEREN'T FOR THE WORK of environmental organisations and their supporters, toxic waste would probably still be incinerated at sea and nuclear waste dumped there, dams would have destroyed Tasmania's unique Franklin River wilderness and mines would probably be operating in the Antarctic and the Kimberley region — to name just a few of the campaign successes of the last decades. But most of the time, successes aren't achieved easily and require more than experienced staff and lobbyists. Local, national and international environment organisations rely heavily on the commitment, work and money of members, volunteers and supporters.

Earlier this year, a study commissioned by the NSW Environment Protection Authority (EPA) examined the environmental knowledge, attitudes, skills and behaviour of more than 1100 residents of NSW. It found that most respondents were concerned about environmental problems and relied on environmental and conservation groups for information about the state of the environment. Nearly half had donated to such an organisation in the past year.

Environmental organisations often pursue common goals and work in co-operation with each other. We surveyed nine Australia-wide organisations (three of which are part of international networks) to find out the differences — major or subtle — between them. Almost all the organisations we surveyed said they networked and co-operated with each other — on a regular basis, occasionally or in coalition, depending on the nature of the specific goal pursued.

From the material the organisations supplied, we compiled brief profiles outlining their basic philosophy, goals and structure. We also included some financial information to give you an idea of the organisations' income sources and their areas of expenditure. It's by no means an analysis of the organisations' financial transactions — if you're a regular donor or member and want to get the full picture, ask the organisation for its annual report or audited financial statement.

They all need you \$\$\$

Giving money isn't the only way to support an environmental organisation, but in some ways it's the easiest. All the groups we surveyed are either registered as public benevolent organisations or

have their fund-raising activities registered. They all gladly accept your donation and the Commonwealth Government will recognise it as a tax deduction for all but one (Friends of the Earth Australia has applied and is awaiting approval for tax-deductibility status).

Monetary donations from members and the public are an important source of income. For some of the groups — the Australian Conservation Foundation, Greenpeace Australia, The Wilderness Society and the World Wide Fund for Nature — they constituted about a quarter of their income.

The profiles include other financial information, as provided by the organisations, to give you an indication of the amount of money that's changing hands, from whom it's coming and on what it's being spent. It's not meant to be comparative — the organisations we surveyed vary considerably in size and nature, as do their budgets, sources of income and areas of expenditure.

For example, Greenpeace — with the largest membership and the highest income among the organisations surveyed — also spent the highest proportion on fund-raising, but to maintain what it calls "absolute independence", it accepts no funds from governments or industry. The Australian Trust for Conservation Volunteers (ATCV), on the other hand, works closely with the Commonwealth Government on programs for unemployed people, and receives more than 70% of its income from governments. Considering that ATCV's main objective is the recruitment of volunteers for practical projects which it administers and delivers, it is perhaps not surprising that the proportion of expenditure spent on salaries is highest among the organisations surveyed.

The World Wide Fund for Nature (WWF), perhaps best known for its efforts to conserve threatened species, is increasingly directing resources towards research into the preservation and management of natural habitats and ecosystems. But it's also active on the campaign front. In Australia it recently released its first annual assessment of Commonwealth, state and territory governments' efforts to establish a representative and well managed system of protected areas.

WWF supports projects worldwide that are often administered by other organisations, but it also runs its own scientific research and conservation projects in the field. While members aren't involved in these projects on a practical

level, WWF hopes to develop a volunteer program in the future to give members the opportunity of more hands-on experience. Meanwhile they can support the organisation with donations or letter-writing campaigns.

Getting your hands dirty

If you have time to spare and your interests or talents lie in outdoor work, many of the organisations we surveyed offer their membership practical involvement in projects they support. And for at least three of them — the Australian Trust for Conservation Volunteers, Earthwatch Australia and Greening Australia — community involvement is uppermost on their agenda. Volunteers can lend hands-on support on projects all over Australia and overseas. Some examples are listed in the profiles; they range from basic clean-up or weed-removal operations, through tree-planting and dune-regeneration work, to scientific data collection.

Members of the ATCV can contribute to long-term projects on a daily basis or attend weekend or residential projects, staying on site for several days. The ATCV also administers and delivers LEAP projects (Landcare and Environment Action Program) for the Commonwealth Department of Employment, Education and Training. These programs are intended to improve future employment chances of young unemployed people and benefit the local community at the same time.

Earthwatch Australia is a scientific research organisation which sells places to volunteers to participate in research projects all around the world, covering areas as diverse as wildlife management, archaeology, marine ecology, cultural anthropology, agriculture and art history. Volunteers need no special skills but have to be at least 16 years old and in good health to participate in expeditions, which usually last for two weeks. Earthwatch says it's strictly apolitical. Like Greening Australia and the ATCV, it doesn't engage in lobbying or campaigning.

Campaigning for change

For most of the organisations we surveyed, however, lobbying governments or campaigning for change in policy or legislation is a major activity. If you prefer political involvement in campaigns rather than practical work, you can support your preferred environmental organisation in its campaign efforts. This

LOCAL GROUPS

To find out which local environmental organisation works in your area on issues you're interested in, contact the Conservation Council (or Nature Conservation Council) in your state. These are umbrella organisations for a large number of local and state environmental groups. Some local branches of the national organisations we surveyed are also members of conservation councils in various states. Conservation councils generally assist local environmental groups and facilitate communication and liaison with national or international bodies. They're also involved in policy development and campaign work, and some offer membership to individuals. Others run bookshops, publish journals and provide vital resources for students, activists and the public.

If you're particularly interested in the preservation of wilderness and want to learn about the natural environment you could join the various states' National Parks associations. Their size and scope varies from state to state. Overall, though, they're working for the enlargement and good management of existing national parks and carry out research and campaigns for new parks and stronger protection strategies.

You can contact the state conservation councils at the following addresses.

ACT: Conservation Council of the South East Region and Canberra, Kingsley Street, Acton (GPO Box 1875, Canberra 2600).

Phone: (06) 247 7808, fax: (06) 248 5343.

NSW: Nature Conservation Council of NSW (The Environment Centre of NSW), 39 George Street, The Rocks 2000.

Phone: (02) 247 4206 or 247 2228, fax: (02) 247 5945.

NT: Environment Centre Northern Territory, GPO Box 2120, Darwin 0801.

Phone: (089) 81 1984, fax: (089) 41 0387.

Queensland: Queensland Conservation Council, 2nd floor, 166 Ann Street, Brisbane 4000.

Phone: (07) 221 0188, fax: (07) 229 7992.

SA: The Conservation Council of South Australia, 120 Wakefield Street, Adelaide 5000.

Phone: (08) 223 5155, fax: (08) 232 4782.

Tasmania: Tasmanian Conservation Trust Inc., 102 Bathurst Street, Hobart 7000.

Phone: (002) 34 3552, fax: (002) 31 2491.

Victoria: Environment Victoria (formerly The Conservation Council of Victoria), 1st floor, 247 Flinders Lane, Melbourne 3000.

Phone: (03) 654 4833, fax: (03) 650 5684.

WA: Conservation Council of WA, 79 Stirling Street, Perth 6000.

Phone: (09) 220 0652, fax: (09) 220 0653.

can take the form of writing letters to government or industry representatives, circulating petitions or assisting with research on campaign issues.

The Australian Conservation Foundation (ACF) actively campaigns for a wide range of environmental and associated social issues both on a local and national level. Apart from campaigning, it pursues its broad agenda of "greening all parts of industry, government and the community" in various other ways. For example, it provided its first Federal Budget submission earlier this year and is currently working on next year's. On another front its commercial arm, ACF Enterprises, operates an accreditation program for products deemed to be of environmental significance, quality and purpose. Products that have passed a comprehensive assessment, including a modified cradle-to-grave analysis, feature the 'ACF Endorsed Product' logo to help consumers recognise and support them.

Greenpeace Australia's current campaigns concentrate on global warming, clean air and water, anti-nuclear issues, clean production, and protection of forest ecosystems. Campaign priorities are determined by Greenpeace International; national offices decide how to work within these priorities. Volunteers can contribute to campaign, research or office work, but to participate in Greenpeace's well publicised direct actions — such as boarding nuclear-powered ships at sea — you'd have to join its staff, or become a committed regular supporter and attend briefings beforehand.

More examples of campaigns are listed in the organisations' profiles.

Think globally and act locally

In some organisations whose top priorities include campaigning, lobbying or public activism there's still room for volunteers' practical involvement as well. Friends of the Earth, for example, operates on a grass roots level through 12 local, autonomous groups. While an individual group's work is guided by the organisation's national policies, its priorities and activities vary from group to group. Some may campaign on global issues such as nuclear and alternative energy or genetic engineering; others may be formed to deal with a pressing local environmental issue such as transport alternatives, recycling initiatives or the establishment of a community garden.

For the running of its branch offices, The Wilderness Society (TWS) relies heavily on the work of volunteers. But interested supporters can also work as researchers in the bush or assist with other campaign work such as submission writing. Those who can't volunteer their time regularly are encouraged to participate in direct actions or other campaign work. TWS's national campaigns concentrate on wilderness areas and directly related issues, and have focused in the recent past on the timber industry, mining access, ecotourism, ecologically sustainable development and the impact of four-wheel driving and horse-riding on wilderness areas.

We've included the National Trusts in our survey, although they're perhaps best known for acquiring, restoring and maintaining properties deemed to be of national heritage significance. While they don't organise public demonstrations in wilderness areas, they do actively lobby for the preservation of Australia's natural heritage, as well as the built environment. Some of their environmental projects include bush, beach and rainforest regeneration, the conservation of wilderness and the establishment and maintenance of gardens at Trust properties.



AUSTRALIAN CONSERVATION FOUNDATION

The Australian Conservation Foundation (ACF) has offices in Victoria (head office), NSW and the ACT and is represented by honorary councillors in all Australian states and territories. It currently employs 60 staff, has 200 volunteers and 90,000 members or supporters nationwide.

■ "Projections for planet Earth indicate that massive ecological collapse is the inevitable consequence of a continuation of current trends. ACF believes this consequence can and must be averted. In fact, we must repair the damage to our planet and start on a new path to recovery." This statement of purpose is "ACF's vision for the planet as it moves towards the year 2050. It is this vision of the future which drives the entire organisation".

■ **Objectives:** To "ensure ecological sustainability in which the integrity of the biosphere is maintained; a full natural range of genetic, species and environmental diversity is maintained; human population numbers and resource use are stabilised; environmental and societal planning are integrated and form the basis for economic planning and development; the planet's resources are managed in a manner which maximises options for future generations; every individual, group, corporation and government recognises the value of human and non-human entities and that balance and harmony in the biosphere are essential to survival of the planet; and there is equity and social justice for all."

■ **Main activities** (in order of priority): Lobbying, campaigning, education, research, public activism, practical projects.

■ **Examples of current campaigns:** Biodiversity, water, forests, coasts, sustainable agriculture, energy and transport, sustainable industry, indigenous people, 'genethics' (the ethics of genetics), green jobs.

■ **Membership:** \$39. This entitles members to receive the quarterly newsletter *Conservation News* and to attend branch meetings.

■ **Commercial activities** (other than fund-raising drives): Mail order catalogue, product endorsement program, corporate sponsorship, ethical investment programs, *Habitat* magazine, green home guidelines, etc.

■ **Income in 1993/94:** \$5 million (30% from commercial and fund-raising activities, 25% from donations, 23% from bequests, 10% from membership fees, 10% from government grants, 2% from corporate sponsorship).

■ **Expenditure breakdown 1993/94:** 35% activities, 35% salaries, 20% fund-raising (includes membership recruitment and production of publications), 10% administration.

■ ACF indicated its financial statements are audited and publicly available.



EARTHWATCH

AUSTRALIAN TRUST FOR CONSERVATION VOLUNTEERS

The Australian Trust for Conservation Volunteers (ATCV) is represented in all Australian states and territories except Tasmania, which is covered by the Victorian office. Its head office is in Ballarat (Victoria). The ATCV currently employs 50 staff and has up to 3600 volunteers/members nationwide.

■ The ATCV engages volunteers to carry out practical conservation work in the field for public and private landholders.

■ **Objectives:** "To involve the community in practical conservation projects on a voluntary basis and to assist land managers and conservation programs that require assistance and are labour-intensive."

■ **Main activities** (in order of priority): Practical projects, education, research.

■ **Examples of projects:** Track-clearing work, boardwalk construction, weed removal, tree-planting and maintenance, habitat maintenance, revegetation, wetland establishment and restoration, bushland regeneration, riverbank stabilisation, and plant and animal identification.

■ **Membership:** \$20; family and group rates are available. This entitles members to receive the quarterly newsletter *Conservator*, an annual review and to participate in activities.

■ **Commercial activities** (other than fund-raising drives): The ATCV sells T-shirts to members. It charges a fee for service to landholders it assists, but not at a commercial rate. The fee contributes to project costs.

■ **Income in 1993/94:** \$3.4 million (58% from government-funded programs for unemployed people, 26% from commercial activities, 13% from government grants, about 1% each from membership fees, donations and corporate sponsorship).

■ **Expenditure breakdown 1993/94:** 62% salaries, 30% activities, 8% administration.

■ Audited financial statements are publicly available.

ATCV volunteers painting a boardwalk at Tidbinbilla Nature Reserve in NSW.



EARTHWATCH AUSTRALIA

Earthwatch Australia is an affiliate of Earthwatch International and has its office in Melbourne. It currently employs the equivalent of three-and-a-half full-time staff, has four regular volunteers in the office and 1100 members nationwide. Earthwatch International is based in the US and has 75,000 members worldwide.

■ Earthwatch Australia's mission is "to improve our understanding of the planet, the diversity of its inhabitants and the processes that affect the quality of life on earth". It is a scientific research organisation which "directly involves ordinary people in the process of scientific inquiry to allow people to learn about environmental and cultural issues and to contribute to the search for solutions".

■ **Objectives:** "To facilitate scientific field research and promote education of environmental and cultural issues."

■ **Main activities:** Support scientific field research through public participation. Research and education are of equal importance. Earthwatch Australia is strictly apolitical and doesn't engage in any lobbying or campaigning.

■ **Examples of projects supported** (in 1993 in the Australia, New Zealand, Indonesia and Papua New Guinea region): Land degradation, rangelands research, preservation of Aboriginal rock art, rainforest ecosystems, bird migration, humpback whales, honey possum and honeyeater biology, platypus, echidna and kangaroo ecology.

■ **Membership:** \$45. This entitles members to receive the bi-monthly *Earthwatch* magazine and a quarterly bulletin for Australia and New Zealand. Everyone who donates time and money to assist on a research expedition receives a report from the scientist at the end of each field season.

■ **Commercial activities:** None except the sale of places on scientific research expeditions.

■ **Income in 1992/93:** \$312,000 (75% from membership fees and volunteers, 15% from corporate sponsorship, foundations and individuals, 5% each from donations and bequests).

■ **Expenditure breakdown 1992/93:** 77% spent on activities, 16% on administration (including salaries), 7% on fund-raising. Seven per cent of funds raised here were transferred to projects administered by Earthwatch International. Affiliate offices overseas contributed about 75% of direct support provided to Australian research projects — that's mainly payments from overseas volunteers for participation in research expeditions in Australia.

■ Earthwatch Australia indicated its financial statements are audited and publicly available.



FRIENDS OF THE EARTH

Friends of the Earth (FoE) Australia is a federation of 12 local, essentially autonomous groups, which are active in the ACT, NSW, Queensland, SA, Victoria and WA. FoE Australia is a member of Friends of the Earth International (FoEI), a worldwide federation of 52 independent member groups. FoE Australia currently employs 12 staff across Australia, has 200 volunteers and 5000 members nationwide. The organisation has no national head office but there are officers responsible for liaison between FoE groups within Australia and for international liaison. The profile below is based on information received from FoE's national liaison officer and from newsletters.

■ Friends of the Earth is "committed to the preservation, restoration and rational use of the ecosphere".

■ **Objectives:** "To protect the earth against further deterioration and restore damage inflicted upon the environment by human activities and negligence; preserve the earth's ecological, cultural and ethnic diversity; increase public participation and democratic decision making...; achieve social, economic and political justice and equal access to resources and opportunities for men and women...; [and] promote environmentally sustainable development..."

■ **Main activities:** Campaigning/public activism, practical projects, lobbying, research/education. Priorities vary from group to group.

■ **Examples of recent campaigns and projects:** Uranium mining, nuclear issues, genetic engineering, alternative energy, urban planning, transport alternatives, waste minimisation, recycling, Lake Eyre Basin, native title issues, water, forests, world heritage, global warming, seed bank of local plants, tree-planting, soil erosion control, community gardens.

■ **Membership:** Fees vary from group to group. The Fitzroy group in Melbourne currently charges \$20 for people on a low income, \$30 for those earning a wage, \$40 for households and \$50 for organisations. Membership of a local group includes a subscription to the national magazine *Chain Reaction* and local newsletters.

■ **Commercial activities** (other than fund-raising drives): Two groups in Victoria currently operate food co-ops, and the Melbourne (Fitzroy) group has a bookshop as well; the Queensland group is engaged in ecotourism.

■ **Income and expenditure:** FoE Australia receives an annual grant from the Commonwealth Government to support national FoE functions and for distribution to local FoE groups. Local groups raise their income from membership fees, fund-raising events, commercial activities and donations. Groups may also receive government grants. The national office indicated, as an example, that the largest (Melbourne) group spent about 85% of its income on campaign activities, 14% on administration and 1% to 'pay the rent' to Aboriginal communities.

■ The national office indicated its financial statements are audited and publicly available.

GREENING AUSTRALIA

Greening Australia is a federation of independent organisations represented in all Australian states and territories and a national office in Canberra. It currently employs 160 staff, has hundreds of volunteers and 5000 members nationwide.

■ "Greening Australia promotes the importance of vegetation and the sustainable management of Australia's land resources; creates opportunities for people and organisations to be involved in the greening of Australia; encourages the community to conserve, manage and replace vegetation; helps Australians who share an interest in land and vegetation management to form self-help groups; and provides planning, technical advice and training."

■ **Objectives:** "To develop a strong community-based network dealing with community environmental concerns; an Australia-wide vegetation management strategy based on local and regional plans; a strong and pervasive vegetation care ethic; and a total catchment approach to vegetation management and revegetation initiatives."

■ **Main activities** (in order of priority): Practical projects, education, information, technical and planning advice, funding advice; also provides advice and information through workshops, field days and site visits for sponsors.

■ **Projects:** Greening Australia assists private and commercial landholders, community groups and local councils to restore farmland and agricultural properties and to work together to restore bush and revegetate waterways, parks and gardens.

■ **Membership:** \$20 for individuals (higher rates apply to groups, schools and organisations). This entitles members to receive regular newsletters, annual reports, brochures and flyers.

■ **Commercial activities** (other than fund-raising drives): Greening Australia delivers services under contract to Commonwealth, state and local governments. It also sells books and other information and promotional material on environmental issues through its bookshops and direct mail.

■ **Income and expenditure:** Greening Australia's national office could not supply financial data from its state offices, which operate independently.

■ The national office indicated its financial statements are audited but not publicly available.

GREENPEACE



GREENPEACE AUSTRALIA

Greenpeace Australia is represented in NSW, Queensland, SA, Victoria and WA (head office in Sydney). It currently employs 60 staff, has up to 20 volunteers working for it at any one time and has 89,000 members nationwide. Its parent organisation, Greenpeace International, has offices in 30 countries and about five million supporters in more than 150 countries.

■ "Greenpeace is an international environmental action group that seeks solutions and campaigns to avert global warming, for a nuclear-free future, and to stop toxic pollution." It "campaigns against environmental abuse, in particular of the world's oceans, through the use of non-violent direct action; the lobbying of relevant authorities and international fora; by providing detailed information on alternatives and solutions; and by working with companies that can provide practical solutions to environmental problems."

■ **Objectives:** "To halt and reverse the destruction of the atmosphere and biosphere; to stop nuclear weapons and nuclear power; to end the international trade in toxic wastes; to promote disarmament; to promote the use of alternative and renewable energy sources; to promote the protection of marine animals and their habitat."

■ **Main activities** (in order of priority): Campaigning, public activism, education, lobbying, research, practical projects.

■ **Examples of current and recent campaigns:** Southern Ocean whale sanctuary, Green Olympics/urban renewal, Ningaloo Reef/WA (against oil exploration), toxic trade in the Asia-Pacific region, Jervis Bay, stopping nuclear power in Asia, Antarctica, marine ecology, toxic chemical production and waste disposal, ozone depletion, global warming.

■ **Membership:** \$35 for individuals, \$50 for households and \$25 concession. This entitles members to receive the quarterly magazine *Greenpeace Australia News* and campaign material. People interested in donating regularly (a minimum of \$10 per month) can become Friends of the Rainbow Warrior, which entitles them to attend talks by prominent environmentalists and visit the Rainbow Warrior when she is in port.

■ **Commercial activities** (other than fund-raising drives): Greenpeace Australia operates a mail order catalogue and merchandise stalls. It claims that all products in the catalogue, in manufacture and function, "must contribute to conserve the earth's resources; must exhibit an environmental improvement over similar items; must benefit the planet and not just the individual's health and well-being; must be tested independently to substantiate all claims and ensure quality".

■ **Income in 1993:** \$9.9 million (25% from membership fees, 25% from donations, 22% from monthly giving program, 15% from commercial activities, 11% from Greenpeace International grants, 2% from legacies).

■ **Expenditure breakdown 1993:** 56% activities, 37% fund-raising, 7% administration (salary expenditure makes up 36% of the total expenditure across all areas).

■ Audited financial statements are publicly available.

THE NATIONAL TRUST

(Including the Australian Council of National Trusts)

The Australian Council of National Trusts (ACNT) is the federal body for all state and territory National Trusts. The Trusts employ about 350 staff, have between 6000 and 8000 volunteers and 75,000 members nationwide. The profile below is based on information received from the federal body and from various states' National Trust newsletters.

■ "The Australian Council of National Trusts is a community-based organisation committed to the preservation of Australia's heritage."

■ **Objectives:** To work with the community to identify, conserve and preserve Australia's heritage.

■ **Main activities:** Restoration projects, lobbying, campaigning, research, education, property management.

■ **Examples of current projects:** Acquisition, protection, restoration and maintenance of properties deemed of national heritage significance, re-establishment of gardens, wilderness conservation, bush and rainforest regeneration, beach dune restoration, riverbank planting.

■ **Membership:** Fees vary from state to state. For example, individual membership costs from \$26 in the NT to \$41 in NSW and Victoria; household and concession rates are available. This entitles members to receive a regular journal, local newsletters and bulletins and to participate in organised activities.

■ **Commercial activities** (other than fund-raising drives): The Trust has retail outlets selling National Trust items and souvenirs at its properties, which are open to the public. Non-members have to pay a fee for entry.

■ **Income and expenditure in 1993/94** (for the national office only): \$360,000, primarily from a Commonwealth Government grant (65%). State and territory trusts pay a levy to assist the operation of the ACNT office. About 5% of total income is secured from other sources. Seventy per cent of funds were spent on administration, 30% on salaries.

Note: Income and expenditure figures for the national office are not representative of the individual Trusts, whose annual incomes vary substantially. For example, the 1993/94 income of the Victorian Trust exceeded \$4 million, while that of the NT was about \$300,000.

■ The organisation indicated its financial statements are audited and available through its annual report.



THE WILDERNESS SOCIETY

The Wilderness Society (TWS) is represented in the ACT, NSW, Queensland, SA, Tasmania, Victoria and WA (national office in Sydney). It has 23 branches and 13 shops nationwide and currently employs 17 full-time, four part-time and 20 casual staff. TWS has approximately 500 volunteers, 13,000 members and 105,000 supporters across Australia and overseas.

■ TWS campaigns solely for the protection and preservation of wilderness. It's a grassroots-based organisation which relies heavily on the work of volunteers for campaign and branch office work.

■ **Objectives:** "To protect, promote and preserve wilderness."

■ **Main activities:** Campaigning/public activism and lobbying, education, research.

■ **Examples of campaigns:** Softwood substitution (plantation timber instead of native old-growth forest timber for building purposes), prevention of sand mining and overgrazing of rangelands, campaigning against four-wheel drive activities in wilderness areas, lobbying for Commonwealth wilderness legislation and a protected areas strategy.

■ **Membership:** \$39 for individuals, \$45 for households or \$25 concession. This entitles members to receive five copies of the national magazine *Wilderness News*, branch newsletters and information on campaigns.

■ **Commercial activities** (other than fund-raising drives): TWS has a merchandising arm based in a warehouse in Melbourne. Sales are by mail order catalogue, wholesaling and through a network of Wilderness Society shops. Merchandise includes TWS T-shirts, posters, stickers, books, calendars, diaries.

■ **Income in 1992/93** (for national office only): \$1.3 million (29% from membership fees, 23% from donations, 18% from raffles, 16% from fund-raising, 9% from government grants, 4% from commercial activities).

■ **Expenditure breakdown 1992/93** (for TWS's national office only): 57% campaigns, 31% fund-raising, 12% administration (salary expenditure makes up 39% of the total expenditure across all areas).

■ Audited financial statements are publicly available.

WORLD WIDE FUND FOR NATURE

The World Wide Fund for Nature (WWF, formerly World Wildlife Fund) has offices in NSW and Victoria. It currently employs 14 staff, has six volunteers and 20,000 supporters nationwide. It is affiliated with WWF International, which has 28 affiliate and associate national conservation organisations worldwide.

■ WWF is a "global, independent, multicultural and non-party political organisation [which uses] the best available scientific information [and strives] to build appropriate partnerships with other conservation organisations, environment and population institutions, government and government institutions" with the ultimate goal "to stop, and eventually reverse, the accelerating degradation of our planet's natural environment and to help build a future in which humans live in harmony with nature".

■ **Objectives:** "To conserve nature/ecological process by preserving genetic species and ecosystem diversity, ensuring that the use of renewable natural resources is sustainable both now and in the longer term, promoting actions to reduce pollution and the wasteful exploitation and consumption of resources and energy."

■ **Main activities** (in order of priority): Supporting practical projects, campaigning, education, research, lobbying.

■ **Examples of recent projects supported in Australia:** Research into rare and endangered species, conservation of native grasslands, conservation of remnant bushlands on agricultural lands, monitoring of the illegal trade in wildlife, community awareness of endangered species, policy analysis (trade and the environment, sustainable development, tropical timber imports, air pollution).

■ **Membership:** \$35 for individuals, \$50 households. This entitles members to receive quarterly newsletters including information on projects in Australia and overseas and on fund-raising activities.

■ **Commercial activities:** WWF no longer operates a mail order catalogue but receives part of its income from licensing its name and internationally well-known panda logo for sales promotions to "environmentally responsible manufacturers", who are encouraged to conform to WWF's environmental guidelines.

■ **Income in 1992/93:** \$2.35 million (25% from sales promotions, licences, corporate and major donations, 23% from other donations, 20% from government grants, 19% from corporate sponsorship, 11% from membership fees, 2% from commercial activities).

■ **Expenditure breakdown 1992/93:** 62% activities, 16% salaries, 14% fund-raising, 8% administration. In 1992/93, WWF Australia transferred \$110,000 raised in Australia to its parent organisation and received \$25,000 from WWF International for projects in Australia.

■ WWF indicated its financial statements are audited and publicly available.

THE CUTTING EDGE

If your yard or garden is looking a little rough round the edges, a line trimmer could be the answer. We put electric trimmers through their paces and found some are only fit for strictly 'light duties'.

A QUICK GLANCE through a hardware store is enough to show that all line trimmers were not created equal. The first thing you may notice is there are two basic types, petrol-powered and electric, but both come in a surprising range of shapes and sizes. The petrol variety tends to be more powerful and suitable for heavy-duty use. For the average suburban yard or townhouse garden, some of the electric models are quieter, more manageable and more than adequate.

We tested all electric trimmers available in Australia for less than \$150 and found a wide range of performance and operational comfort. The best trimmers are powerful and effective, yet easy to use owing to thoughtful design. At the other end of the scale there are weakling trimmers that look user-friendly because of their size, but turn out to be poor performers and a pain in the back to operate for any length of time. This is something to beware of if you find power tools a little intimidating or naturally assume a small, light machine will make life easier.

SO, WHAT ARE THEY ANYWAY?

Line trimmers are garden power tools designed to cut grass and weeds in places mowers can't reach, such as close to walls, trees, paths or fences. They can also be turned over and used vertically to cut a neat edge along paths and garden beds. They all consist of a handle with controls, a shaft and a cutting head which spins a length of nylon line at high speed, chopping down any stalks of vegetation that get in its path.

Buying a line trimmer should allow you to hang quite a few other garden tools at the back of the shed to gather dust in peace. They'll do a much faster job along paths than stick edgers. They'll put an end to edging your laborious way along the lawn from the front gate to the house with a spade or mattock, and they'll slice the long grass away from fences and house piers with speed and efficiency that will make you forget hand shears forever.

What they won't do very well is sub-

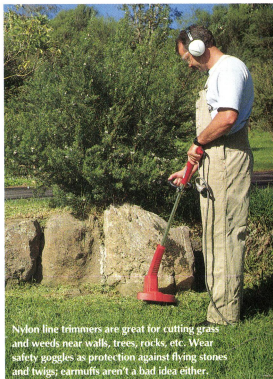
stitute for a lawnmower. For people with very small areas of grass to maintain — such as inner-city terrace or townhouse gardens — a line trimmer could be pressed into service as a replacement mower and would certainly be easier to store, but don't expect 'bowling green' results. Trimmers are handheld, so they cut grass much less evenly than mowers. In testing trimmers for this purpose, we found it was quite easy to 'scalp' patches of lawn with only a slight lapse in concentration, resulting in circular bald spots that are probably not for the houseproud. They are also much slower than a mower, making them of doubtful worth for all but the smallest yards. Also keep in mind that you'll have to rake up the cut grass afterwards.

WHAT TO LOOK FOR

Line trimmers come with a variety of features. Some, like edge rollers — small wheels to guide the trimmer along paths — might come in very handy, depending on the type and amount of work you do with a trimmer. They're great if you have miles of path edges.

The BLACK & DECKER GL595, WEED EATER XT 355, HUSQVARNA ET 500 and FLYMO MET300 and MET250 all have cutting heads which can rotate 180°, turning the head rather than the whole machine and making the trimmers even easier to use for edges. The top of the handle on the WEED EATER XT 305 rotates instead, but this isn't as convenient because you also have to reposition the assist handle (see below) every time you do it.

An assist handle is the one feature you really shouldn't do without. Located along the shaft of the trimmer, it allows you to grip the machine with both hands, spreading the weight evenly between your arms to give better control and far greater comfort. The best handles are adjustable up and down the shaft. Only two models in our test lacked this essential — the BLACK & DECKER GL320 and the WEED EATER XT 205. These machines are by far the smallest and lightest tested, giving the impression that an assist



Nylon line trimmers are great for cutting grass and weeds near walls, trees, rocks, etc. Wear safety goggles as protection against flying stones and twigs; earmuffs aren't a bad idea either.

handle is unnecessary. However, using them one-handed quickly becomes mild torture for the lower arm, while bending down to grab the shaft with your free hand only gets you into back pain territory. As a consequence, these two trimmers, despite appearances, had the worst ease of use scores of all those tested.

The WEED EATER XT 205 also vibrated badly, making it even tougher on that poor single arm. Excessive vibration is annoying and very uncomfortable if you're using these machines for extended periods. The other two models of WEED EATER, the XT 305 and XT 355, as well as the HUSQVARNA ET 500, also shook a little too much for comfort, though with these it only became a real problem with prolonged use.

The STIHL FE 35 has a well designed Y-shaped handle in combination with an assist handle that wraps right around the shaft, so it's the same to hold no matter which way up you have the cutting head. The WEED EATER XT 305 and XT 355

boast telescopic, adjustable-length shafts: a great feature for improving user comfort, since people come in many different sizes.

FEEDING THEM A LINE

Use any of these machines for a while and you'll quickly learn to recognise the drop-off in cutting performance that signals 'more line needed'. This happens frequently, especially in rough conditions, because the nylon cutting line wears down fairly quickly. When it does, you have to feed your trimmer some more line from the spool, which is located either on the upper handle or down at the cutting head. All models feature a blade positioned on the safety guard to automatically trim the newly extended line to the correct length.

The line feeding alternatives are semi-automatic, fully automatic and manual. Most of the models tested had semi-automatic line feeds. Some are 'bump-n-go' — when the cutting line begins to wear down, all that's required to feed more line through is to bang the cutting head

lightly on the ground while running the trimmer. This is slightly inconvenient if you're using the machine in the upside-down, path-edging mode at the time, and some of the more powerful units tended to cut a noticeable ring into the lawn in the process. However, 'bumping' on concrete paths could damage the machines in the long run.

We found the best performers for line feed were the BLACK & DECKER GL620 and the STIHL FE 35. They employ a lever or trigger on the handle so you can feed line as required without pausing from cutting at all. This gives you complete control and allows you to get on with the job. Also, because the line spool on the BLACK & DECKER GL620 is located on the upper handle with the feed lever, you can always see how much line you have left and the spool itself is kept up out of the dirt.

Of the fully automatic variety, the two FLYMO models use a system that feeds line when you release the trigger and allow the head to slow down. This has the disadvantage of requiring you to

let the cutting head come almost to a stop every time you need more line, as well as wasting a lot of line if you're doing stop-start work. By contrast, the BLACK & DECKER GL595 kept the line coming as needed without having to stop cutting at all. This worked well but still didn't provide the same degree of control as the best semi-automatic systems.

Manual feed means literally stopping the machine, lifting the head up and pulling more line from the spool with your hands. In rugged cutting conditions, like trimming long grass growing against concrete paths, bricks or stone walls, you might have to go through this rigmarole every 15 seconds! The only trimmer we tested that still has this old-fashioned and frustrating system was the BLACK & DECKER GL320. It scored very poorly for ease of use because of it.

SPOOLING AROUND

Easy respooling is a big plus with these machines. Running out of line when you've almost finished the job is frustrating enough. If you have to spend 10



RYOBI RCT 525A MKII

BLACK & DECKER GL620

BLACK & DECKER GL595

HUSQVARNA ET 500

WEED EATER XT 355

minutes to get going again, you'll wish you'd bought another model. The STIHL FE 35 — the only model in our test with dual cutting lines — was found particularly wanting in this area. Two lines are a lot more difficult to wind onto the spool than one and easily become tangled. The makers provided no instructions on how to go about this tricky and annoying task (all the others do), and when we checked with them, they told us the spools are not intended for do-it-yourself rewinding. They suggest you buy their prewound replacement spools, a much quicker but more expensive option.

You can buy prewound spools for all models except the HUSQVARNA ET500. They vary in the length of line they contain and range in price from around \$5 to a little over \$10. They're an extremely convenient way to replace the cutting line, but they work out up to 10 times more expensive than buying the line in bulk and winding it onto the spool yourself. If you use your line trimmer heavily, you might feel the cost savings on bulk line are worth the effort.

If you do decide to do it yourself, look for a model with an arrow on the spool to indicate the direction you're meant to wind the line. It can save you a lot of headaches. The BLACK & DECKER GL320 and both the FLYMO models failed to offer this handy tip. The people at FLYMO have since assured us they will introduce such an arrow shortly.

TOP PERFORMERS

We found big differences in performance among the trimmers tested (see the table overleaf). A good trimmer ought to be able to cut a swath through heavily overgrown grass, and the best performers in our test did this with ease. Others were so severely slowed down by the heavy going that you wouldn't want to use them on much more than the odd daffodil. The BLACK & DECKER GL320, GL420 and the FLYMO MET250 were found to be suitable for only the lightest duties, and they were sluggish even then.

At the other end of the performance scale, the RYOBI RCT 525A MKII is as powerful as some petrol-powered mod-

els. It should have little trouble with anything growing round the edge of the average yard. Not far behind it, the HUSQVARNA ET 500 is also quite deadly to scruffy outcrops of the thickest grass.

WHAT TO BUY

RYOBI RCT 525A MKII	\$140
BLACK & DECKER GL620	\$135

The best trimmer in our test was the RYOBI RCT 525A MKII. This machine is both powerful and easy to use. Despite being one of the heaviest trimmers tested, its thoughtful design gives it balance and ease of operation that make it less tiring to use than some of the underpowered midget models. Its only drawback, besides its weight, is that its power may intimidate some users.

For the smaller person who is less concerned with horsepower, we can also recommend the BLACK & DECKER GL620 as a lighter, more manageable, but still effective alternative.

odel profiles are in rank order. Prices shown are a good target to aim for when shopping around, based on nationwide checks in July 1994. Anything lower is a bargain.

RYOBI RCT 525A MKII

Target price: \$140

Good points

Best overall.

Motor is positioned at top of shaft, making the trimmer well balanced and comfortable to use, despite being heavier than the average. This has the added advantage of keeping the motor away from dirt and moisture.

The top performer, with a large cutting diameter and lots of power. Good for clearing large, overgrown areas.

Good 'bump-n-go' line feed system.

Easy to respool.

Bad points

Weight may worry small or slightly built people.

Line occasionally broke off inside spool.

BLACK & DECKER GL620

Target price: \$135

Good points

Best choice for those put off by the RYOBI's size and weight.

Amount of line remaining is always visible.

Adequate power for most ordinary uses.

Good line feed system controlled by hand lever.

Bad points

Fairly small cutting diameter.

Trigger control was stiff and tiring to use.

BLACK & DECKER GL595

Target price: \$120

Good points

Easy to use.

Automatic line feed works well.

Convenient twist head for path edging, with inbuilt edge guide.

Easy to respool.

Bad points

Ran a dead heat for weakest performer of our recommended trimmers, but should be adequate for normal yard work. Not suitable for heavy-duty applications.

Cutting head fell off our test model after heating up from prolonged use.

The maker claims this problem affected only a few units and has since been fixed.

HUSQVARNA ET 500

Target price: \$130

Good points

Good 'bump-n-go' line feed system.

Good performance — will handle reasonably heavy clearing work.

Biggest cutting diameter of all models tested.

Respooling is easy except that the spool cover is slightly difficult to get off.

Good twist head for path edges.

Bad points

This model is quite large and heavy, making it tiring to use after a while.

Vibrates to a moderately annoying degree.

Top handle grip of the unit we tested had a sharp edge, which was uncomfortable after prolonged use.

The noisiest trimmer tested.

WEED EATER XT 355

Target price: \$120

Good points

Good 'bump-n-go' line feed.

Good, wide cutting diameter.

Adjustable handle length.

Respooling is fairly easy but removing the cover is slightly difficult.

Well designed twist head for path edging.

Bad points

A heavy and tiring machine to use for long periods.

Large cutting head guard slightly impedes vision.

Vibrates noticeably.

Electrical cord in shaft could be damaged during assembly. Because of the variable-length feature, excess cord is needed, which has to be pushed down into a cavity at the bottom of the shaft during assembly. The maker claims to have made assembly easier by increasing the size of this cavity.

Electric line trimmers

Brand/model (in rank order)	Manufacturer/ distributor	Origin	Target price (\$)*	Warranty (years)	Weight (kg)	1	2
						Assist handle	Edge roll
RYOBI RCT 525A MK II	Ryobi	USA	140	1	3.8	✓	
BLACK & DECKER GL620	Black & Decker	UK	135	2	2.4	✓	
BLACK & DECKER GL595	Black & Decker	UK	120	2	2.2	✓	(A)
HUSQVARNA ET 500	Husqvarna	USA	130	1	2.9	✓	
WEED EATER XT 355	Electrolux	USA	120	1	2.9	✓	
WEED EATER XT 305	Electrolux	USA	100	1	1.8	✓	
STIHL FE 35	Stihl	Germany	145	not stated	2.7	✓	
FLYMO MET300	Electrolux	UK	135	1	2.8	✓	✓
NOT RECOMMENDED							
FLYMO MET250	Electrolux	UK	120	1	2.1	✓	✓
BLACK & DECKER GL420	Black & Decker	UK	90	2	1.8	✓	
WEED EATER XT 205	Electrolux	USA	70	1	1.5		
BLACK & DECKER GL320	Black & Decker	UK	70	2	1.4		

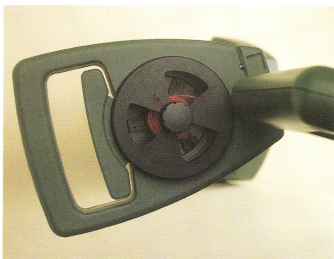
* Prices shown are a good target to aim for based on nationwide checks in July 1994. (A) Has a guide instead of a roller.



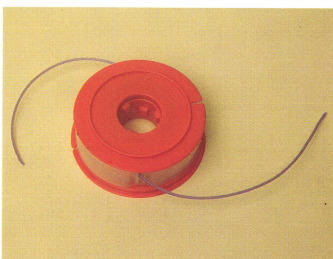
The Stihl FE 35's assist handle wraps right round the shaft, making the trimmer easy to handle no matter which way up you're holding the cutting head.



An edge roller — as on the Flymo MET300 pictured — makes cutting along paths much easier.



The Black & Decker GL620 has the most convenient line feed system: you can always see how much is left, and feed more line when you need it by simply pressing the lever.



Respooling is easy with the Stihl FE 35's pre-wound spools, but this trimmer doesn't provide the much cheaper option of winding the spool yourself; all the other models do.

	4	5	6	7	8	
feed	Noise (dB)	Ease of use score (%)	Respooling score (%)	Performance score (%)	Overall score (%)	Brand/model (in rank order)
i-automatic	88	80	80	80	80	RYOBI RCT 525A MK II
i-automatic	83	70	80	60	68	BLACK & DECKER GL620
matic	82	75	80	50	66	BLACK & DECKER GL595
i-automatic	92	50	70	70	62	HUSQVARNA ET 500
i-automatic	85	60	70	60	62	WEED EATER XT 355
i-automatic	85	60	70	50	58	WEED EATER XT 305
i-automatic	86	55	50	60	56	STIHL FE 35
matic	84	50	70	50	54	FLYMO MET300
						NOT RECOMMENDED
matic	82	60	70	30	50	FLYMO MET250
i-automatic	85	60	60	30	48	BLACK & DECKER GL420
i-automatic	82	30	70	50	46	WEED EATER XT 205
ual	85	30	70	30	38	BLACK & DECKER GL320

1 Assist handle

All the models tested that came with an assist handle — which is very effective for reducing wrist, arm and back strain — had ones which were adjustable (see page 35 for details).

2 Edge roller

When you turn these machines over to trim edges, a roller that allows you to rest the machine and guide it steadily along the path edge makes it easier to keep a straight line. One model, the **BLACK & DECKER GL595**, has a guide instead. This is lined up by sight with the edge of the path — better than nothing but not as handy as the rollers.

3 Line feed

With the exception of the one manual-feed machine, the **BLACK & DECKER GL320**, all line-feeding systems worked reasonably well (see *Feeding them a line* on page 36). The semi-automatics are the most popular and convenient, though we couldn't fault the fully automatic system on the **BLACK & DECKER GL595**.

4 Noise

Noise levels were measured at the head height of the user. Hearing loss prevention experts strongly recommend ear protection when using any machine generating noise at 85 dB or more, especially for prolonged periods. Most of these trimmers qualify for this precaution.

Noise pollution laws in most states prohibit the use of lawnmowers and other noisy power tools outside certain hours. Early-morning or late-night trimming could attract a hefty fine. Check with your local council for details.

5 Ease of use

The line-feeding system was one of the most important factors in scoring the machines, and we also took account of such things as weight, length, balance, vibration, handling comfort and design of controls. Line replacement can be an interruptive and annoying task; it was scored separately (see *Respooling*) because it's so often complained about.

6 Respooling

All models were reasonably easy to respool by winding on more nylon line by hand except the **STIHL FE 35**, which its maker says isn't meant to be done this way. Like all other makers except **HUSQVARNA**, Stihl sells pre-wound replacement spools. These are extremely easy to fit, earning this machine a score of 100% for ease of line replacement; however we docked it 50% for not offering the much cheaper 'wind-it-yourself' option as well.

7 Performance

The trimmers were scored on their ability to mow down grass and weeds in a variety of conditions, including long grass. The low-powered units just couldn't cope with a heavy workload. If you keep a very well and frequently tended garden, high performance and the ability to cut thick, overgrown grass might matter less to you than ease of use, respooling or price.

8 Overall score

We calculated the overall score by weighting respooling, ease of use and performance as follows:

- Respooling: 20%.
- Ease of use: 40%.
- Performance: 40%.



LETTERS

Send your letters to **CHOICE**, 57 Carrington Road, Marrickville 2204. Where possible, please include your daytime telephone number, as we may wish to contact you direct for more information or to discuss your comments and queries.



VICTORIA: WHO CARES?

I am writing to compliment you on your excellent articles in April **CHOICE** regarding carers and hearing aids.

In addition to the contact numbers given in the articles, your readers in Victoria may find it helpful to contact the following:

■ Local government in Victoria is a major provider of Home and Community Care (HACC) services and will know of other local support services.

■ The Action Group for Disabled Children provides advice and support to families and can put people in touch with local support groups or specialist service providers. Its phone number is (03) 650 4539.

■ The Disabled Persons' Information Bureau is a government-run information service. Its number is (03) 616 7704.

Brian Hardy

Manager of Physical and Sensory Disability Services, Health and Community Services, Victoria.

AUSTRALIA POST MAKES CHOICE MOVE

I was interested to read your *Choice Cut* on page 5 of the August 1994 edition of **CHOICE** concerning mail redirection.

After reading the article, I checked our redirection of mail application form and agree with you that the terms and conditions are not clear in respect of parcels.

We will take the necessary action to clarify these conditions for the benefit of your readers and our customers.

R F Ludlow
Deputy Chief Executive
Australia Post

We obtained a draft copy of Australia Post's new redirection form. It now clearly states in its heading: "Application for redirection/holding of letters and parcels", and under a subhead of "Important" states: "This redirection/holding service covers letters and parcels. Parcels redirected between delivery offices will attract an additional postage charge." So it's now clear that parcels will be redirected too, though you'll pay extra for them if you've moved to a different suburb. A covering letter from Australia Post notes, however, that if you choose not to accept the parcel you won't have to pay this additional cost.

THE EYES HAVE IT

Congratulations on your article *Look after your eyes*, published in March 1994. Simply and clearly it summarises the major causes of visual problems and offers useful advice to readers on precautionary steps to be taken to minimise risks of damage (from the sun, for example) and to detect asymptomatic treatable conditions at an earlier stage (such as glaucoma). Greater public awareness and knowledge contributes to more effective preventative programs and curative therapy.

It would be worthwhile for your readers to know that there are several organisations providing further information and support to patients, their fami-

lies and to the general community, such as the Royal Australian College of Ophthalmologists, the Glaucoma Foundation of Australia, the Royal Blind Society and the Lions' Save Sight Institute and associated Prevention of Blindness Societies.

Dr Ivan Goldberg
Department of Ophthalmology,
Prince of Wales Hospital, and the
University of NSW

BUSTING THE DUSTBUSTER

In April this year I purchased a **BLACK & DECKER** Dustbuster HC421 cordless rechargeable vacuum cleaner.

Following the instructions on the enclosed pamphlet I placed the unit on charge for 24 hours (16 hours being stated as the minimum to ensure full charge and maximum effective usage time).

The unit was purchased primarily to thoroughly clean the interior of my car. I was amazed to find in practice that I could only get 10 to 12 minutes' work from the Dustbuster before the charge ran out.

This was not satisfactory from my point of view so I telephoned the **Black & Decker** service centre and was told that this was the sort of running time I could expect from this model of Dustbuster.

I then asked why the company did not state clearly on the box what the maximum operating time would be for a full charge. The response was dead silence.

I should like to draw this matter to your attention and suggest that consumers should be fully informed on this point. Presumably such an admission [on the packaging] would have a negative effect on sales and I consider the omission of such information to be misleading at least.

E Stuart
Booragoon, WA

A spokesperson from Black & Decker confirmed that the average running time with a full charge for the Dustbuster HC421 was about 10 minutes, but

The 14th CHOICE Subscriber Draw

**For new subscriptions and renewals received
October 1 to December 31, 1994**

claimed this should be long enough for its intended uses. Black & Decker's view is that putting the running time on the box would in fact confuse consumers because it believes most people tend to overestimate the time it takes to do certain things, so they would mistakenly think the short running time wouldn't be adequate. A profile of uses is given on the box for each Dustbuster and Black & Decker feels this gives enough information to allow consumers to decide which model would best suit their needs.

However, as the above letter highlights, some Dustbuster buyers may feel let down when they find out just how long the cleaner runs for on a charge. We think printing the average running time on the box alongside the existing usage profiles can only benefit consumers by giving a more complete picture of the Dustbuster's capabilities.

PIZZA PACKAGING

It was with some interest we read your article *Fast food: less waste* (Green page, CHOICE, April 1994).

We were sorry to note that the story focused on the token progress which a couple of multinational organisations have made on the environmental issue, when Australian-owned Pizza Haven has already devoted significantly more effort and made greater advances in this area through its work with another Australian company, Visy Board.

Pizza Haven has developed a 100% recycled pizza box with Visy Board, which was introduced to the national market last year. This initiative was undertaken to provide a real use for all the paper and cardboard materials, including our own boxes, after use without the use of harmful bleaches.

We pay a slight premium for this policy but we believe it is responsible and rewards all those people who make an effort to participate in local recycling programs.

We bring this to your notice in the hope that increased exposure for Australian initiatives in this area will place increasing pressure on multinationals to continue a meaningful recycling effort in this industry and others.

**Tudor Lloyd
National Marketing Manager
Pizza Haven**

Subscriber draws are now held quarterly and on January 4, 1995, we'll be holding our fourteenth. The lucky winner will be able to choose any two products from the following tests, published April 1994 to June 1994.

- | | |
|--|---|
| ☐ Microwave ovens — medium-size (April) | ☐ Steam irons (May) |
| ☐ Video recorders (May) | ☐ Televisions — 68 cm (June) |
| ☐ Safety switches (May) | ☐ Fan heaters (June) |



These are products we bought for testing, so you won't be the first to turn them on or set them up. But we'll cover any service problems with a CHOICE warranty that'll match the manufacturers' — just as if you'd bought them new.

All new CHOICE subscriptions and renewals received from members and personal subscribers (including donors of gift subscriptions) by December 31 will go into the draw, unless of course you indicate you don't want to be included.

(If you're not due to renew your subscription during the period, don't worry, we'll be holding other draws during the year — your renewal notice will have the details. And if you're on a two-year subscription you'll be entered on your first anniversary as well as when you renew again.)

 **Use the order form overleaf** 

CONDITIONS OF ENTRY

1. The winner will be drawn from new subscriptions and renewals from personal subscribers (including members and donors of gift subscriptions) received October 1 to December 31, 1994. If you opt for a two-year subscription, you'll be entered on your first anniversary as well as when you actually renew or subscribe.
2. Information on how to enter and prizes forms part of these conditions of entry.
3. Employees, and their immediate families, of the Australian Consumers' Association and its associated companies and agencies are ineligible to enter.
4. Entrants must be residents of Australia.
5. Applications are subject to a verification check and the judge's decision is final. No correspondence will be entered into.
6. The prizes will be delivered free anywhere within Australia.
7. Prizes cannot be taken as cash.
8. South Australian residents may enter the draw by completing the form and posting to: Reply Paid No. 24, ACA, 57 Carrington Road, Marrickville 2204, without subscribing to the magazine. Only one entry per person is permissible through this method.
9. Last date for receipt of entries to the draw is December 31, 1994. No responsibility accepted for lost, late or misdirected mail.
10. The draw will be conducted at the office of the Consumers' Association at 10 am on January 4, 1995.
11. The winner will be notified by letter and published in the earliest feasible issue of CHOICE after that.
12. The promoter is Australian Consumers' Association, 57 Carrington Road, Marrickville 2204, NSW Permit No. TC94/4398 issued on 2/9/94, Vic Permit No. 94/2911 issued on 2/9/94, ACT Permit No. TP94/1811 issued under the Lotteries Ordinance, NT No. NT94/1485.

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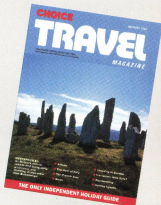
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			2 years @ \$50	
	INSTITUTION		1 year @ \$33	
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	GREY	

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CHOICE Travel takes you behind the brochures and gives honest, down-to-earth advice on where to go, what's to do there, and how to get the most out of your travel dollar.

Travel produced by the UK Consumers' Association and reprinted by CHOICE four times a year. While its reports are from the perspective of a European base, much of the information in them is just as useful to an Australian travelling in Europe and the USA, with occasional forays further afield. There's quality information about different regions, accommodation, specialities of local cuisine, sights to see, as well as places to avoid and tips on dealing with holiday hassles.

A subscription to *Travel* costs just \$27 a year — you can use the form on this page to subscribe. The latest issue, features:

- Southern Italy
- Athens
- The French Alps
- Western Isles of Scotland
- Channel Tunnel

FAN TALES

Although the fans look remarkably alike, one blows the others away in terms of flexibility, safety and features. Unfortunately, it costs more than the others.

Breeze through the following article and see which model fans your desire.

WITH THE ONSET OF SUMMER, most people look for a way of cooling down. Of course air conditioners are great for that, but they cost a lot of money and they can be quite noisy. Fans can be a quiet, cheap option if all you need is some air circulation.

We tested 30 cm and 40 cm pedestal fans to see which ones are quiet and the most versatile. However, if you're interested in buying a desk fan rather than a pedestal model, keep reading because the only difference between the desk and pedestal fans of the same size and brand is the stand. The results for the pedestal fans should hold for the corresponding desk fans.

KEEPING YOUR COOL WITHOUT AN AIR CONDITIONER

The way a fan cools people is by moving air past them, which causes the moisture on their skin to evaporate. If the air is too humid or if your skin is very dry, no evaporation will take place and you will not feel any cooler. An air conditioner not only circulates air like this, but can also lower the room temperature and the humidity, which means a fan can't really compete with an air conditioner in terms of cooling. However, air conditioners are much more expensive initially, cost a lot more to run than a fan, and some people don't like the drier air they produce, so they will not always be the best option. By following a couple of simple guidelines you can improve the effectiveness of your fan and perhaps not feel the need for an air conditioner.

During the day, if the air temperature outside is higher than indoors, leave all the windows and doors shut and circulate the inside air with the fan. In the evening, when the outside air temperature drops below the indoor temperature, open the windows and doors and position the fan near a window to ventilate the house with the cooler air from outside.

The main job of a fan is to move air, but more is not necessarily better. When you're trying to go to sleep, you want the fan to move the air around gently and

quietly, but if you're in a large room with lots of people you'll probably want it to be working flat out to keep the air moving. What is important in a fan is its versatility — the range of air movement it can give between the highest and lowest settings. The air movement range of a fan contributed 50% to our overall score.

As a frequent complaint about fans is the noise they make, we made noise the other 50% of the overall score, based on the average noise level across all the speed settings.

Although we ranked the fans on the

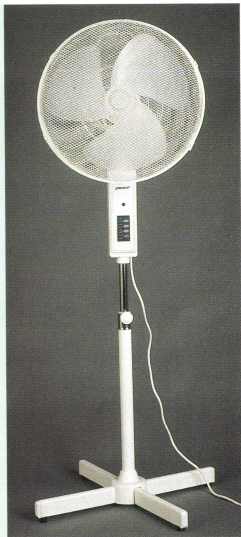
range of air movement they can provide, there is another factor to think of when you're deciding what to buy. Consider two fans that have the same air movement range, but one is stronger than the other and hence able to circulate more air on each of its settings. The stronger one would be good for people who would mainly use it from a distance — for example, if the fan were used to cool down several people in a largish room. The relatively weaker one might be better for people who would use it mainly as a personal fan. Column 3 in the table shows

NUMBER ONE FAN

The **OMEGA** 40 cm fan with remote control stood out from the pack for more than just its finger-safe mesh grille (see main article). It is the only fan with a remote for those times when it's just too hot to get up and adjust the setting, or maybe you want to switch it off while you're in bed. It also has an additional mode of operation with two settings: instead of the fan working at a fixed speed, it varies the speed up and down over about 20 seconds or so. This is supposed to simulate a breeze, and one of these breeze settings is designed to be used to go to sleep with; it automatically turns off after four hours.

This **OMEGA** has by far the greatest range of air movement of the fans we tested, which means you can adjust it from an extremely gentle breeze through more rapid air disturbance to a fierce blast. Its score was over double any other fan's for this factor, making it easily the most versatile model we tested. And it managed to do this relatively quietly, achieving the second-highest score for quietness.

All in all, this **OMEGA** is a big step up from normal fan design and shows there is finally some new creativity going into their design and manufacture. Its only drawback is its price tag: around \$100 compared with \$50 to \$70 for other 40 cm models.



Pedestal fans

Brand/model
(in rank order within sizes)

40 CM FANS

Brand/model	Manufacturer/distributor	Origin	Price (\$)*	Warranty (years)	1 Min/max height (cm)	2 Timer	3 Fan str
OMEGA 40 cm with remote	Omega Appliances	China	99	1	99 / 120	✓	★★★★
AIRMASTER TPA-4093	NG Enterprises	China	50	1	92 / 113		★★★
LINDA LFP78 Island Breeze 93	Linda Electric Industries	Taiwan	60	1	99 / 131		★★★★
MARTEC MA 40PD	Martec Lighting & Appliances	China	57	2	94 / 112		★★★★
AIRMASTER TPA-4093	NG Enterprises	China	65	1	92 / 113	✓	★★★
OMEGA 40 cm with timer	Omega Appliances	China	70	1	99 / 120	✓	★★★★
BONAIRE 0330004	Southcorp	China	45	2	100 / 122		★★★★
DIMPLEX DM16P	Dimplex	Taiwan	73	2	92 / 113		★★★

30 CM FANS

BONAIRE 0330007	Southcorp	China	39	2	80 / 97		★★
OMEGA 30 cm with timer	Omega Appliances	China	50	1	83 / 104	✓	★
MARTEC MA 30P	Martec Lighting & Appliances	China	40	2	83 / 102		★
AIRMASTER TPA-3093	NG Enterprises	China	40	1	88 / 109		★

* Prices shown are what we paid in summer 1994.

which fans are stronger than others, and that the 40 cm fans generally are stronger than the 30 cm models.

TWEEDLEDUM AND TWEEDLEDEE

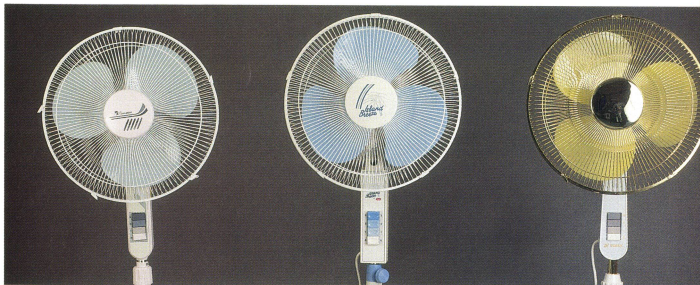
Lining up the fans in this test, we were amazed at the similarities. Except for the OMEGA 40 cm with remote (see *Number one fan* on page 43), they all have three speeds and an oscillator operated by almost identical-looking controls, they have very similar looking stands and feet, the guards over the blades look as if they all come out of the same mould, and most

of them have the same uncomfortable style of carrying handle. All the fan heads can be tilted up or down by approximately the same amount, and when they are oscillating from side to side the angles through which they travel are all similar.

We put the fans on a slope to see which models are most likely to topple over, and found they're also very similar in terms of stability. Apart from size, the major visible difference is that a few of them have a timer. However, although the fans looked alike, their performance showed differences.

SAFETY

The grille over the fan blades is designed to prevent fingers coming into contact with the blades. However, only the OMEGA 40 cm with remote has holes that are small enough: its grille is made of a wire mesh instead of metal rods. With all other models, our tester could put her little finger through the gaps in the grille and touch the blade, so it is possible children could hurt their fingers by pushing them into the casing, as the lower edge of the fan heads can be less



The Airmaster TPA-4093: exceptionally quiet but less versatile in terms of air movement than most other 40 cm fans, so less useful over a broad range of situations.

The Linda and Martec 40 cm models were very similar for both noise and air movement — not as good as the Omega 40 cm with remote, but considerably cheaper.

Sound level (dB) at: ultra-low speed	Low speed	Medium speed	High speed
Not applicable	40	45	48
Not applicable	34	40	43
Not applicable	42	46	49
Not applicable	43	47	50
Not applicable	44	48	50
Not applicable	46	48	50
Not applicable	47	52	54
Not applicable	46	48	50
Not applicable	37	44	47
Not applicable	40	44	45
Not applicable	40	43	43
Not applicable	44	48	49

5
Noise
score (%)

6
Air movement
range score (%)

7
Overall
score (%)

Brand/model
(in rank order within sizes)

40 CM FANS

OMEGA 40 cm with remote
AIRMASTER TPA-4093
LINDA LFP78 Island Breeze 93
MARTEC MA 40PD
AIRMASTER TPAT-4093
OMEGA 40 cm with timer
BONAIRE 0330004
DIMPLEX DM16P

30 CM FANS

BONAIRE 0330007
OMEGA 30 cm with timer
MARTEC MA 30P
AIRMASTER TPA-3093

than a metre off the ground. Watch out where you're putting your own fingers, too, if you move the fan while it's running.

WHAT TO BUY

40 CM FANS

OMEGA 40 cm with remote	\$99
AIRMASTER TPA-4093	\$50
LINDA LFP78 Island Breeze 93	\$60
MARTEC MA 40PD	\$57

30 CM FANS

BONAIRE 0330007	\$39
-----------------	------

Similar models

There is an OMEGA 40 cm fan with neither remote nor timer which is the same as the 40 cm fan with timer we tested, and also an OMEGA 30 cm fan without timer similar to the one with timer tested.

The MARTEC MA 40P does not have the brass guard and translucent plastic blades featured on the MARTEC MA 40PD tested (see photo).

1 Minimum/maximum height

The height of each of the fan heads can be adjusted. These figures show the minimum and maximum heights of the centre of the fan blades above the ground. The height may be relevant if you have small children and want to keep the fan head well out of their reach.

2 Timer

A timer switches the fan off after a preset length of time. The OMEGA 40 cm fan with remote has a timer that can be set to one, two or four hours; the others can be set to run for up to two hours.

3 Fan strength

The more stars, the stronger the fan is, averaged over all its speed settings. If you use the fan mainly as a personal fan, one that has one or two stars may move enough air for you. However, if you usually have the fan blowing at you from a distance, you'd be better off with a three or four-star fan.

4 Noise levels

It's inevitable that fans make a noise: a large component of the noise heard with the fans we tested is actually the air rushing

past, and of course it gets louder as the fan speed is increased and there is more air circulation. However, the fan motors can still be heard over the air noise, and slight differences in design and construction also make a difference to the noise levels. For example, the AIRMASTER TPA-4093 on 'high' provides the same air circulation as the BONAIRE 0330004 on 'medium', but is appreciably quieter.

Only the OMEGA 40 cm fan with remote had four speed settings, and the noise level at ultra-low speed was so quiet we could barely record it: 32 dB is about as loud as a soft whisper, yet for people who don't like much air movement past them, the fan is still effective.

5 Noise score

The noise score is based on the average of each fan's noise levels at the various speeds. We judged that the best possible score of 100% would go to a fan that had an average noise level of 40 dB or less, and the worst score of 0% would be for an average noise level of 70 dB or more. The AIRMASTER TPA-4093 is, on average, so quiet that it scores 100%.

6 Air movement range score

There are occasions when you want a very gentle circulation of air, and others when only a fierce blast feels effective. The air movement range score reflects the difference in how much air the fan can 'push' between the lowest and highest settings.

7 Overall score

Air movement range and noise each made up 50% of the overall score.



Unless you want only a very feeble breeze, the Bonaire 0330007 is the only 30 cm model worth buying. Like the other Bonaire it has about a metre of power cord more than the other fans, which gives more flexibility in where you can put it.



WHAT DO YOU KNOW?

- 1** In all Australian states it is currently an offence to drive a car while using a handheld mobile phone.
True or false?



- 2** Approximately what percentage of Australian households owns a microwave oven?
A) 50%
B) 60%
C) 70%
D) 95%

- 3** The Australian Design Rules (ADR), which set out minimum safety and design standards, apply to which type of consumer product?
A) Cars.
B) Houses.
C) Electrical appliances.
D) Children's toys.

- 4** A four-head video recorder will allow a much finer-detail picture to be shown during normal-speed playback than can be produced with a two-head machine of similar quality.
True or false?

- 5** Which is the most popular magazine in Australia in terms of circulation?
A) TV Week.
B) Australian Women's Weekly.
C) Time.
D) Cosmopolitan.



- 6** Polyethylene terephthalate (PET) is a recyclable plastic commonly used in soft-drink bottles. What percentage of this plastic is currently recycled in NSW and Victoria?
A) 10%
B) 30%
C) 50%
D) 90%

- 7** A D-size rechargeable NiCad battery will always have a greater capacity than its smaller C-sized cousin.
True or false?

- 8** Most two-litre milk and juice containers on the market are made from a recyclable plastic known as high-density polyethylene (HDPE), which is worth about \$250 per tonne to recyclers. Approximately how many two-litre HDPE containers does it take to make a tonne?
A) 2000
B) 10,000
C) 20,000
D) 100,000

- 9** Royal jelly, produced by bees, is claimed to have therapeutic value when taken by humans. It is renowned for the fact that it doesn't produce any allergic reactions in otherwise allergy-prone people.
True or false?



ANSWERS

- 1. False.** It is only a specific offence in NSW and Victoria at present, though in other states you can still be booked for not paying due care and attention if it can be shown that using the phone was impairing your driving ability.
- 2. C.** After the USA and Japan, Australia comes third in the microwave ownership league.
- 3. A.**
- 4. False.** During normal-speed playback all video recorders use only two heads. Extra heads can be used to enhance some of the special features such as still frames, slow motion or long play.
- 5. B.** According to Audit Bureau of Circulation figures reported in the June issue of *AdNews*, the *Australian Women's Weekly*

had a circulation in excess of one million, as of March 1994. For the same period the other magazines listed had circulations of less than half of this.

6. B.

7. False. The labels C and D only refer to the physical size of the battery and, with NiCads, size doesn't necessarily relate to charge capacity. The capacity, measured in amp hours, is usually stated separately.

8. C.

9. False. There are several documented cases of allergic reactions to royal jelly, including the death of an 11-year-old girl in Australia. Royal jelly products must now carry a warning regarding their use by asthma and allergy sufferers.



RECALLS AND BANS

you find a recall or ban not on our list, please let us know. Companies often rent 008 or 1800 numbers for a couple of months after the recall is announced. If the number given is no longer operating, note the manufacturer or retailer direct.

na has recalled ELNA LOTUSPRESS (purchased before August 1, 1994) as a wiring problem may cause a short circuit in the power supply. Return to retailer to exchange for a new modified Lotuspress. Contact Elna on 008 025 391.

collapsible, non-layback, umbrella stroller, sold through Clints Crazy Bargain Stores during June and July 1994, has been recalled as the buckle may ease under minimal pressure, thus rendering the stroller ineffective in restraining any occupant. The stroller fabric has a striped background with various coloured cloud patterns. Return to retailer for refund.

Woolworths has recalled KANLEY TUNGSTEN HALOGEN BODILIGHT 220-240 V 500 W (BLACK OR GREEN) there is an electrical safety problem caused by the four coding of the earth wire and the security of fixing to the body. The recalled product was sold at Woolworths stores from June 13 to July 25, 1994, and can be recognised by the item number 01 and barcode 93 11547 141011. Return to retailer for refund, or call Kanley on (02) 750 9957.

uzu General Motors Australia has recalled 1994 JACAROO 1992-94 (V6 PETROL ENGINE) MOTOR VEHICLES as, under some conditions, the shaft end plug in the V6 3.2 Litre (6V) engine may become dislodged and cause rapid loss of engine oil, which could result in engine damage or even engine compartment fire. Affected vehicles were sold between August 1992 and July 1994 within the following ISOVIN number ranges:

port wheel base — JACUBS2SDN7100114 to CUBS2SDR8100257.

ing wheel base — JACUBS2SGN7100358 to CUBS2SGR8102465.

turn to a Holden dealership to arrange rectification.

nm Piper has recalled TOM PIPER VANILLA CREAMED RICE 450g CANS and PARSONS CECREAM VANILLA FLAVOURED DESSERT 450g contamination may cause serious illness if the product is consumed. Code numbers of affected tins are stamped on the base: Tom Piper — 06.27, 94.06.29 or 94.06.30; Parsons — 06.27, 94.06.28, 94.06.30 or 94.07.01. Anyone who has consumed the product within the last 24 hours should consult their doctor. Call 1800 641 76 to arrange for reimbursement.

stra Pharmaceuticals has recalled the INSPIRATORY/EXPIRATORY VALVE OF ASTRA MEDITEC IP/RMT MASK (used for treatment of obstructive pulmonary diseases such as cystic fibrosis) as in some cases the membrane in the inspiratory arm of the valve has become dislodged and there is the risk may be inhaled and obstruct breathing. Contact Astra Pharmaceuticals for a replacement valve, on (02) 978 3500.

Following court action by the NSW Department of Consumer Affairs, **Jaymark Australia Toys** has recalled its BABY PLAY SET (made in China) as small balls within the rattle can be released and pose a choking hazard.

The T-SV RUGER LADY SMITH DIE CAST CAP GUN has been withdrawn from sale in Adelaide as it poses a safety hazard. The gun fires plastic bullets with sufficient force to fail the penetration test of the Australian Standard. The gun, which was sold for \$9.95, should not be used.

CHOICE

The magazine of the Australian Consumers' Association

(A non-profit company limited by guarantee) ACN 000 281 925

We work on behalf of Australian consumers by producing and providing useful and accessible information, and representing and advancing their interests.

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TWELVE MONTH INDEX

NOVEMBER 1993 — OCTOBER 1994

(T) Test

(D) Includes assessment of suitability for people with disabilities

(U) Update of previous report

* Additions or corrections to reports, small follow-up items, or letters

Air travel, domestic	Jan	Fan heaters	Jun (T,D)	Microwave ovens, medium	Apr (T,D)
Alarms, personal emergency	Apr (T,D)	Fans, pedestal	Oct (T)	Microwave queries answered	Apr
Artificial sweeteners	May	Fast foods	Apr (T)	Mobile phones	Aug (T)
Australian products, buying	Feb, Aug*	Fleas, controlling pets' Food	Feb	Mortgage switching	Nov
Bank service	Sep	artificial sweeteners	May	Nappies	Nov, Apr*
Beds, sofa	Jan	breakfast cereals	Jan (T)	Nutrition information trends	Aug
Binoculars	Mar (T)	brie cheese	Dec (T)	Oven cleaners	Sep (T)
Birth control, methods of	Oct	fast foods	Apr (T)	Paint, exterior	Aug (T), Oct*
Blenders	Jan (T)	frozen meals	Sep (T)	Pâté	Jun (T)
Breakfast cereals	Jan (T)	healthy eating	May	Patients' rights	Dec
Brie cheese	Dec (T)	nutrition information trends	Aug	Pedestal fans	Oct (T)
Bullbar dangers	Jun	pâté	Jun (T)	Peanut butter	Jul (T)
Buying Australian	Feb, Aug*	peanut butter	Jul (T)	Petrol, half lead	Oct
Buying a fitted kitchen	Sep	Ford truck warranty	Jul	Plastics recycling	Jun
Buying guide, annual	Dec	Frozen meals	Sep (T)	Privacy of information	Feb
Cars		Garden hoses	Nov (T)	Public transport	Sep
bullbar dangers	Jun	G-Code programmer	Jun (T)	Refrigerators, 395-450 litre	Feb (T,D)
CD players	Jan (T)	'Green' organisations	Oct	Reliability survey, cars	Mar
crash tests	Aug	Half lead petrol	Oct	Safety switches	May (T)
half lead petrol	Oct	Health insurance	May, Aug*	School sponsorship	Apr
extended warranties	Feb	Healthy eating	May	Selling your home	Jun
reliability survey	Mar	Hearing aids	Apr, Oct*	Sofa beds	Jan
roadworthiness	Apr	Heaters, fan	Jun (T,D)	Solar lamps	Oct (T)
steering wheel locks	Jan (T), Sep*	Hot water trial	Sep	Stalking	Mar
Carers, services for	Apr, Oct*	Income protection insurance	Jul, Oct*	Statutory derivative action	Aug
Carpets		Index, four-year	Jun	Steering wheel locks	Jan (T), Sep*
buying	Mar	Insurance	Aug	Strollers, layback umbrella	Aug (T,D)
'unstainable'	Oct (T)	information brochures	Jan	Supermarket survey	Jul
CD players, multi-disc for cars	Jan (T)	duty of disclosure	May, Aug*	Telephone, privacy	Jun
Chainsaws	Jul (T)	health	Jul, Oct*	Telephones	Nov (T)
Cheese, brie	Dec (T)	income protection	Apr	Telephones, mobile	Aug (T)
Charities	Jun	letter-writing guide	Jan	Televisions, large-screen	Jun (T)
Childcare	Oct	unnecessary	Mar	Toasters	Mar (T,D)
Childcare questionnaire	Nov	Investment, ethical	May (T,D)	Transport, public	Sep
Clothes dryers	Feb (T,D)	Investment options	Sep	'Unstainable' carpet	Oct(T)
Cockroaches, getting rid of	Nov (T), Jul (U)	Irons	Oct (T)	Vacuum cleaners, low-priced	Jul (T,D)
Contact lenses	Jul	Kitchen, buying a	Oct (T)	Video game systems	Dec
Contraception, methods of	Oct	Lamps, solar	Nov (T), Jan*	Video recorders	May (T)
Coolers, small, for drinks	Dec (T)	Lawn trimmers	Aug	Warranties, extended, for cars	Feb
Credit Reference Association	Sep	Lawnmowers, petrol	Jan (T), Sep*	Washing machines	Sep (T,D)
Dental care	Dec	Life insurance commissions	Mar	Wine, two-litre casks	Dec (T)
Dishwashers	Nov (T,U)	Locks, steering wheel	May		
Drinks coolers, small	Dec (T)	Market competition			
Duty of disclosure, insurance	Jan	Microbes in the body			
Ethical investing	Jun				
Extended warranties for cars	Feb				
Eyes, looking after	Mar, Oct*				